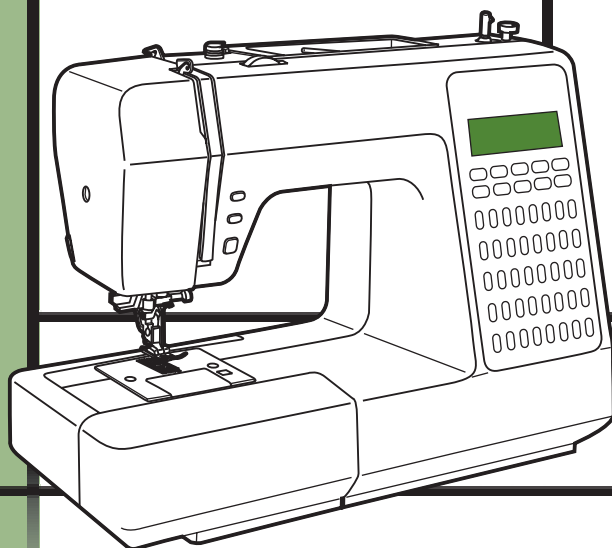


Another quality product from

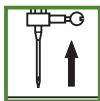
EURO-PRO 



Instruction Manual

Model 9105

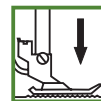
SYMBOL INSTRUCTIONS



Raise needle



Raise presser foot



Lower presser foot

IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic safety should always be followed, including the following:

Read all instructions before using this sewing machine.

DANGER -To reduce the risk of electric shock:

1. An appliance should never be left unattended when plugged in.
2. Always unplug this appliance from the electric outlet immediately after using and before cleaning.
3. Always unplug before re-lamping. Replace bulb with same type rated 5 watts.

WARNING -To reduce the risk of burns, fire, electric shock, or injury to persons:

1. Do not allow to be used as a toy. Close attention is necessary when this appliance is used by or near children.
2. Use this appliance only for its intended use as described in this manual. Use only the attachments recommended by the manufacturer as contained in this manual.
3. Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the appliance to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.
4. Never operate the appliance with any air openings block. Keep ventilation openings of the sewing machine and foot controller free from accumulation of lint, dust, and loose cloth.
5. Keep fingers away from all moving parts. Special care is required around the sewing machine needle.
6. Always use the proper needle plate, a wrong needle plate can cause the needle to break.
7. Do not use bent needles.
8. Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
9. Switch the sewing machine off ("O") when making any adjustments in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot, and the light.
10. Always unplug sewing machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in the instruction manual.
11. Never drop or insert any object into any opening.
12. Do not use outdoors.
13. Do not operate where aerosol spray products are being used or where oxygen is being administered.
14. To disconnect, turn all controls to the off ("O") position, then remove plug from outlet.
15. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.

SAVE THESE INSTRUCTIONS

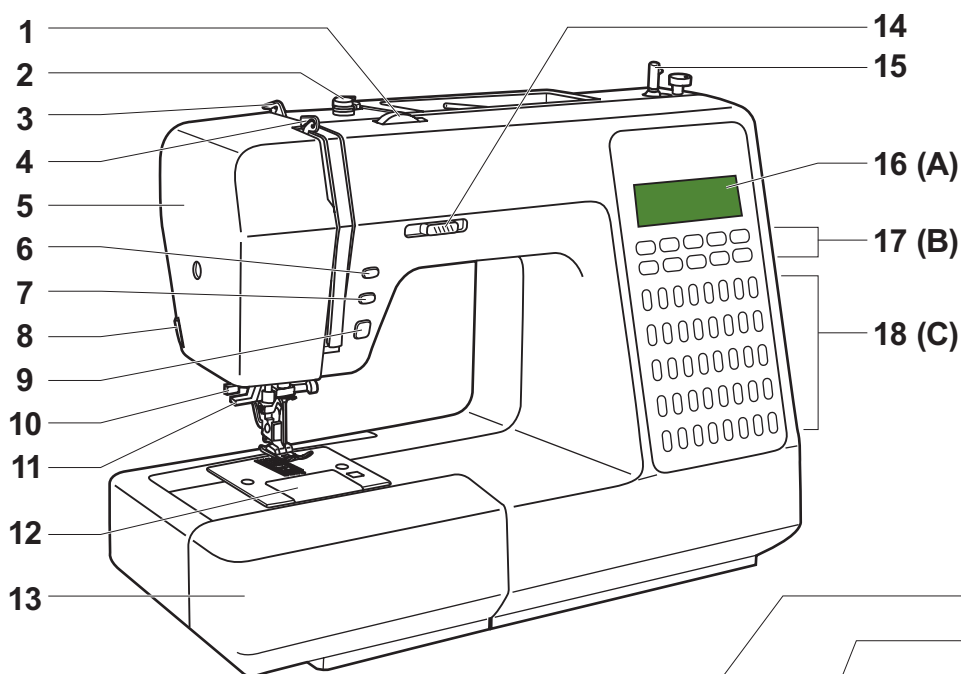
This sewing machine is intended for household use only.



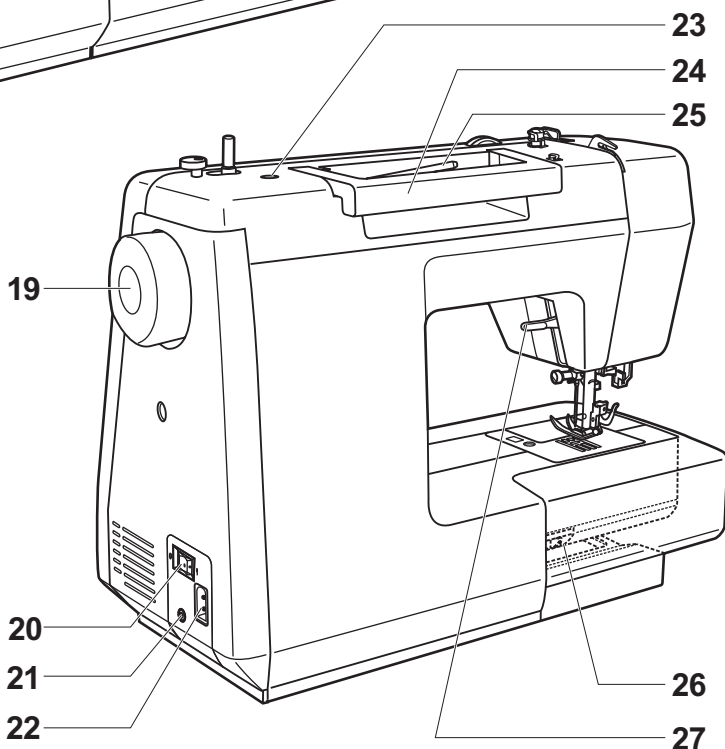
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PRINCIPAL PARTS OF THE MACHINE



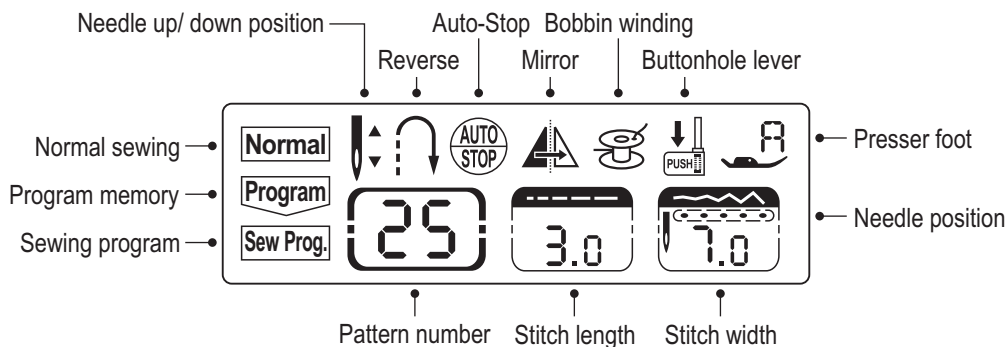
1. Tension dial
2. Bobbin thread guide
3. Upper thread guide
4. Thread take-up lever
5. Face plate
6. Needle up/down position button
7. Auto-lock button
8. Thread cutter
9. Reverse button
10. Buttonhole lever
11. Auto needle threader
12. Needle plate
13. Sewing table and accessory box
14. Speed limiting adjustment lever
15. Bobbin winder
16. LCD (Liquid crystal display)
17. Function of buttons
18. Stitch selection buttons



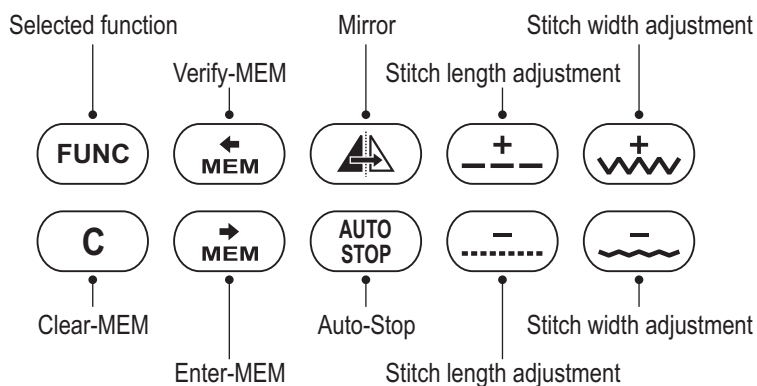
19. Handwheel
20. Main power switch
21. Foot controller connector
22. Power cord
23. Hole for second spool pin
24. Handle
25. Horizontal spool pin
26. Drop feed lever
27. Presser foot lifter

PRINCIPAL PARTS OF THE MACHINE

A. LCD (Liquid crystal display)

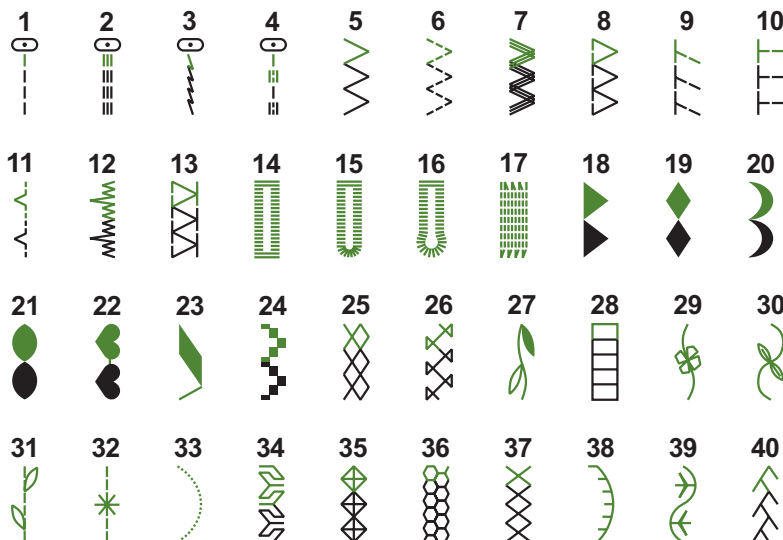


B. Function of buttons



C. Pattern chart

The portion marked in green on the chart below shows the one unit of each pattern.



ACCESSORIES

Standard

1. All purpose foot (T)
2. Zipper foot (I)
3. Buttonhole foot (D)
4. Cording foot (M)
5. Overcasting foot (E)
6. Blind hem foot (F)
7. Hemmer foot (K)
8. Satin stitch foot (A)
9. Quilting foot (P)
10. Darning/ Embroidery foot
11. Gathering foot
12. Button sewing foot
13. Brush/ Seam ripper
14. Spool holder (Large)
15. Spool holder (Small)
16. Seam guide
17. Bobbin(3x)
18. Screwdriver (L & S)
19. Pack of needle
20. Spool pin felt
21. Second spool pin

Standard

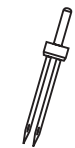


Optional

22. Twin needle
23. Walking foot

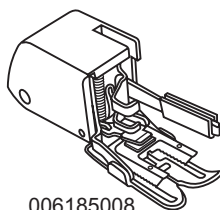
Optional

22

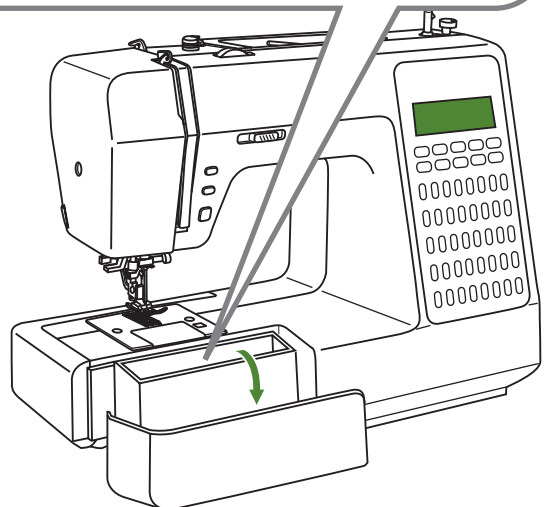


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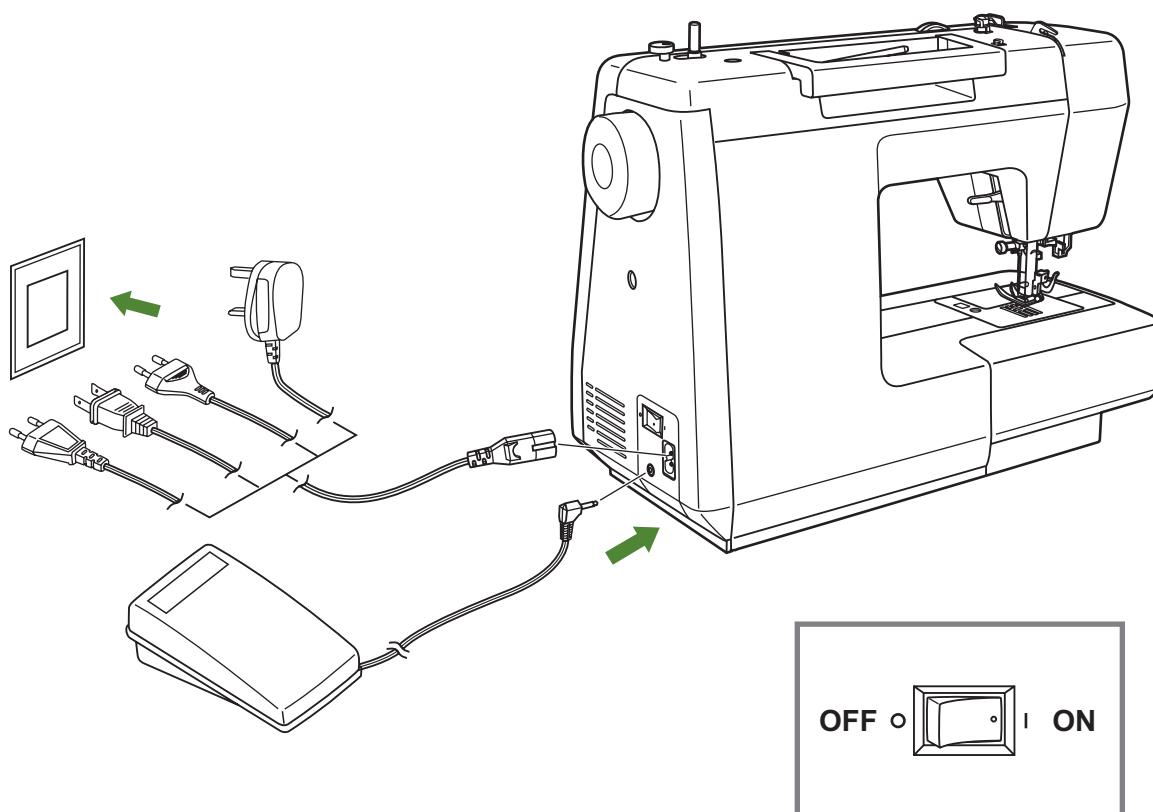
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CONNECTING THE MACHINE TO THE POWER SOURCE



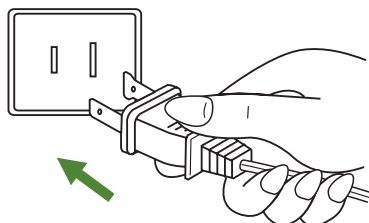
Connecting the machine

Before connecting the power supply, make sure that the voltage and frequency shown on the machine is conforming with your electrical power.

Place the machine on a stable table.

1. Connect the power line cord to the machine by inserting the 2-hole plug into the terminal box.
2. Connect the power line plug to the electric outlet.
3. Turn on the power switch.
4. The sewing lamp will light up when the switch is turned on.

To disconnect, turn the power switch to the off position, then remove plug from outlet.

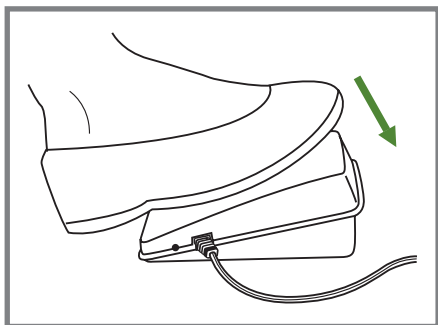


Polarized plug information

This appliance has a polarized plug (one blade wider than the other), to reduce the risk of electrical shock; this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Do not modify the plug in any way.

CONNECTING THE MACHINE TO THE POWER SOURCE

Foot control



With the sewing machine turned off, insert the foot control plug into its connector on the sewing machine. Turn on the sewing machine, and then slowly depress the foot control to start sewing. Release the foot control to stop the sewing machine.

Note: The setting of the speed control lever will limit the maximum speed of the machine.

Attention: Consult a qualified electrician if in doubt as how to connect the machine to the power source. Unplug the power cord when the machine is not in use.

The appliance must be used with the foot controller 4C-337G manufactured by MATSUSHITA ELECTRIC (TAIWAN) CO., LTD.

Message and beeping sound

The computer will automatically adjust the needle upper position when the machine is switch on, and automatically adjust the needle lower position when you start sewing. Please note that it is a normal phenomenon if you hear a sound coming from the machine (machine adjusting sound) and feel that the sewing is being delayed. It's not dangerous to sew.

- When operating correctly: 1 beep
- When operating incorrectly: 3-short beeps
- When the sewing machine is in trouble and can't sew: 8 seconds short beeps

It means that the thread is twisted or jammed and the hand wheel axle can't move. Please look through the "Trouble shooting guide" on page 49 to find the solution. After the problem has been solved, the machine will continue to sew.

Note: If the problem is still not solved, please contact your local dealer.

Attention: During the sewing, if the thread get jammed inside the hook stopping the needle from moving and you continue pressing the foot control, the security switch will stop the machine completely. In order to restart the sewing machine, you will have to turn the on/off switch to the OFF position and the ON again.

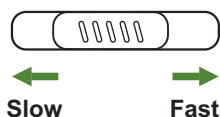
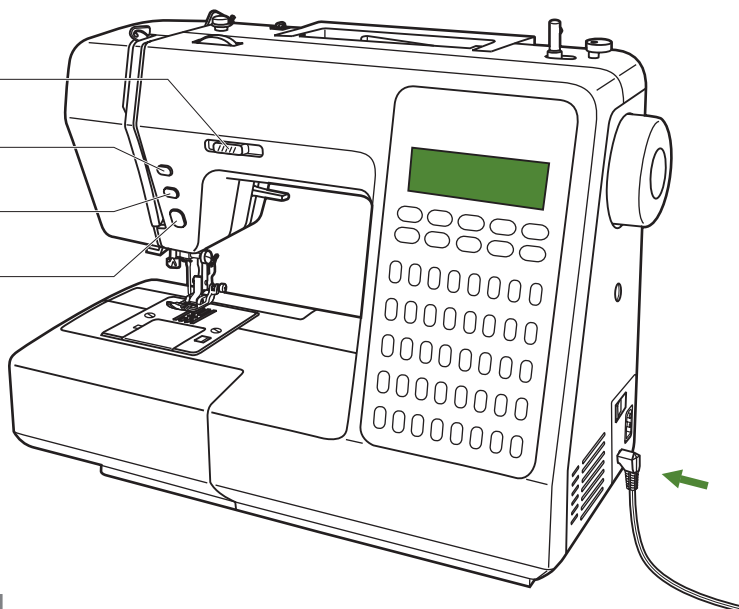
OPERATION BUTTONS AND FOOT CONTROLLER

Speed limiting
adjustment lever

Needle up/down
position button

Auto-lock button

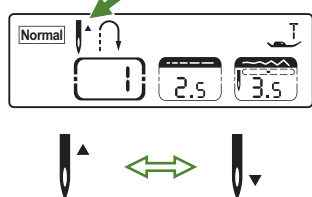
Reverse button



Speed limiting adjustment lever

Slide the lever to change the maximum speed of the sewing machine.

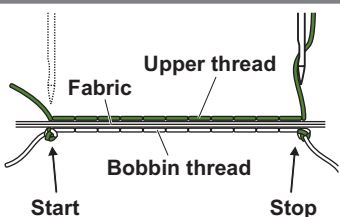
LCD



Needle up/ down position button

With the Needle up/ down position button, you decide whether the needle shall stop in the up position or in the material when you stop sewing. Press the button so that the arrow, on the LCD Screen, will point upward ↑ and the needle will stop in the up position. When you press the button so that the arrow points downward ↓, the machine will stop with the needle in the material.

When you turn on the machine, the needle is always in the highest position.

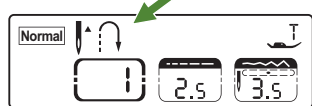


Auto-Lock button

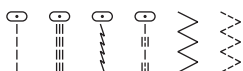
At the end of a seam, the machine will immediately sew 3 locking stitches, when the Auto-Lock button is pressed, then automatically stop.

It will sew 3 locking stitches automatically when one of the patterns 1~4 is being selected.

LCD



Only for pattern 1-6

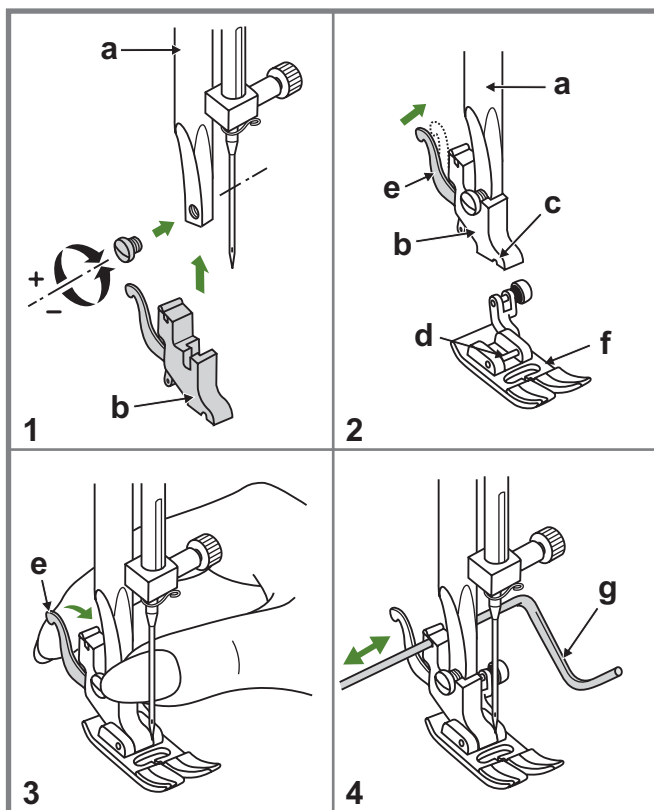
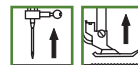


Reverse button (Only for pattern 1-6)

When pattern 1-6 are selected, the machine will sew in reverse while the reverse button is pressed. The machine sews forward when the button is released. For continuous reverse, press the button twice in a quick succession before starting to sew. To sew forward again, press the button once more.

An arrow ↶ on the LCD display indicates reverse sewing.

CHANGING THE PRESSER FOOT



Attaching the presser foot holder (1)

Raise the presser foot bar (a). Attach the presser foot holder (b) as illustrated.

Attaching the presser foot (2)

Lower the presser foot holder (b) until the cut-out (c) is directly above the pin (d).

Raise the lever (e).

Lower the presser foot holder (b) and the presser foot (f) will engage automatically.

Removing the presser foot (3)

Raise the presser foot.

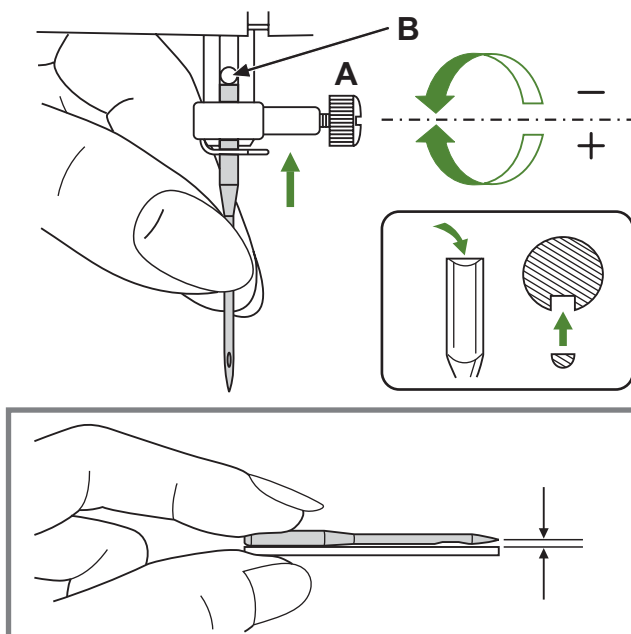
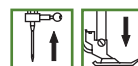
Raise the lever (e) and the foot will disengage.

Attaching the seam guide (4)

Attach the seam guide (g) in the slot as illustrated. Adjust according to need for hems, pleats, etc.

Attention: Turn power switch to off ("O") when carrying out any of the above operations!

REPLACING THE NEEDLE



Change the needle regularly, especially if it is showing signs of wear and causing problems.

Insert the needle following the illustrated instructions.

A. Loosen the needle clamp screw and tighten again after inserting the new needle.

The flat side of the shaft should be towards the back.

B. Insert the needle as far up as it will go.

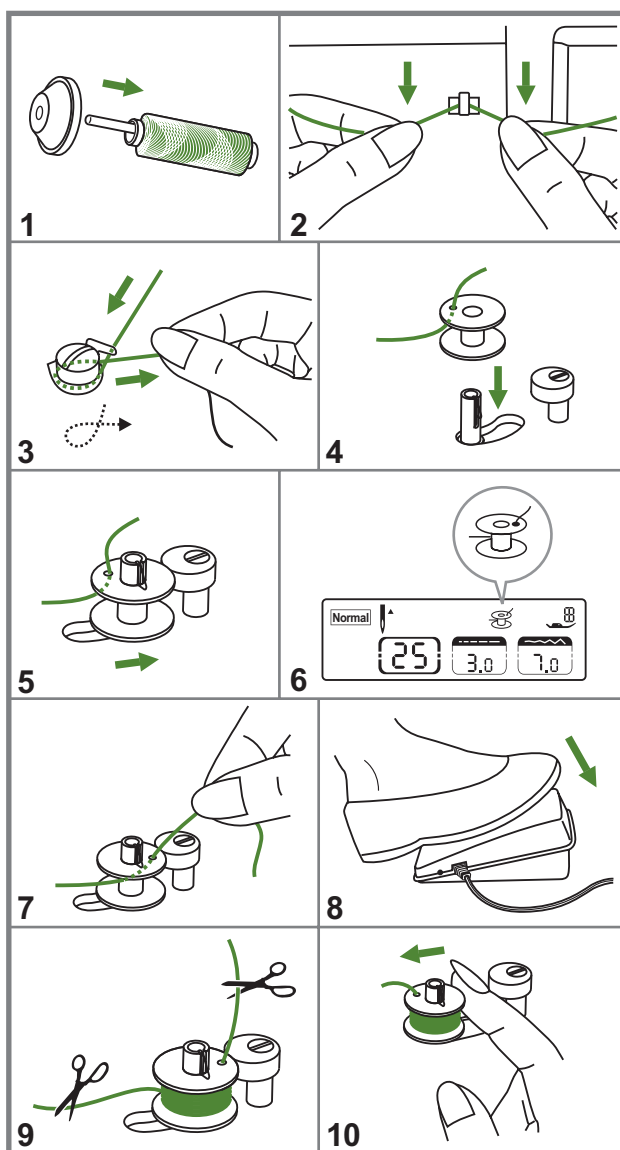
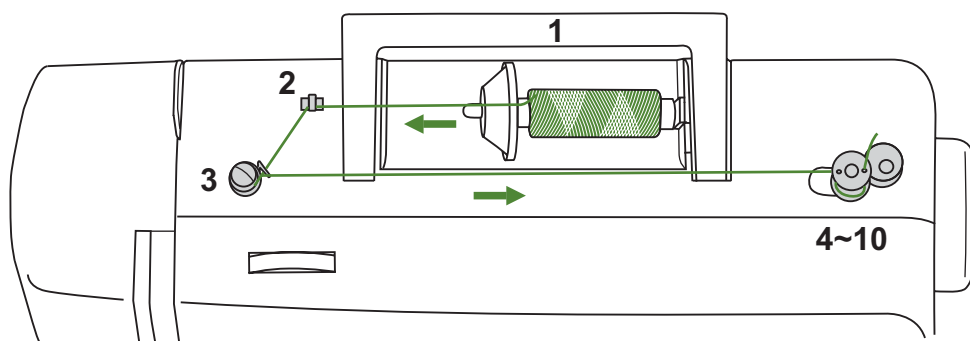
Attention: Turn power switch to off ("O").


Needles must be in perfect condition.

Problems can occur with:

- Bent needles
- Blunt needles
- Damaged points

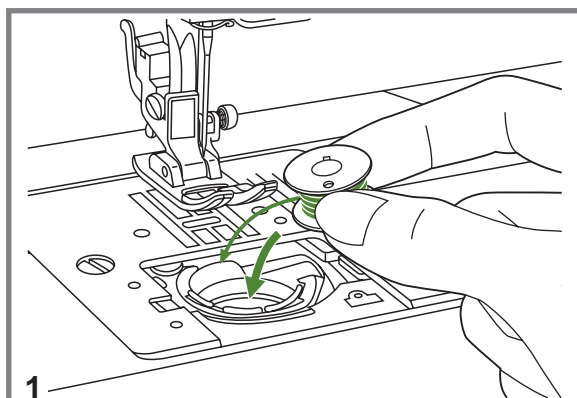
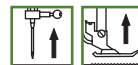
WINDING THE BOBBIN



1. Place the thread and spool holder onto the spool pin. For smaller spools of thread, place spool holder with the small side next to the spool or use the small spool holder.
2. Snap the thread into the thread guide.
3. Wind the thread clockwise around the bobbin winder tension discs.
4. Thread the bobbin as illustrated and it on the spindle.
5. Push the bobbin to the right.
6. When the bobbin winder spindle is push to the right, "bobbin winding position", the symbol  is shown on the LCD screen. It will disappear from the LCD screen when the bobbin winder spindle is push to the left, "sewing position".
7. Hold the end of the thread.
8. Press on the foot control to start the sewing machine.
9. After the bobbin has wind few turns stop the machine and cut the thread near the hole of the bobbin. Continue filling the bobbin until it is full. The bobbin winder will stop automatically when the bobbin is full. Stop the machine and cut the thread.
10. Push the bobbin winder spindle to the left and remove the bobbin.

Please Note: When the bobbin winder spindle is in "bobbin winding" position, the machine will not sew and the hand wheel will not turn. To start sewing, push the bobbin winder spindle to the left (sewing position).

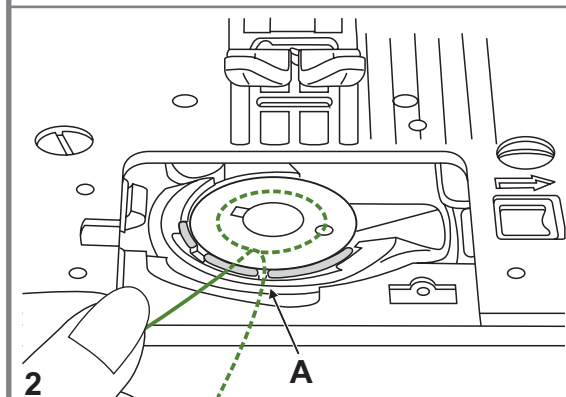
INSERTING THE BOBBIN



1

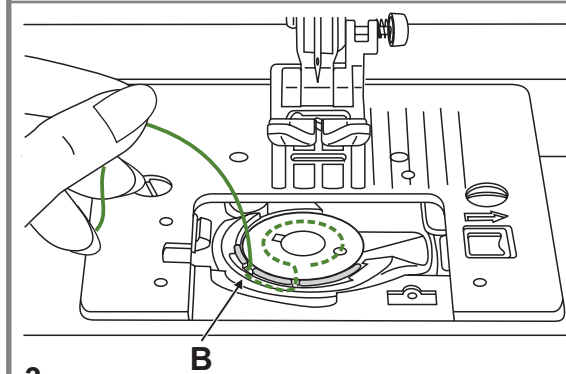
When inserting or removing the bobbin, the needle must be fully raised.

1. Insert the bobbin in the bobbin case with the thread running in a counterclockwise direction (arrow).



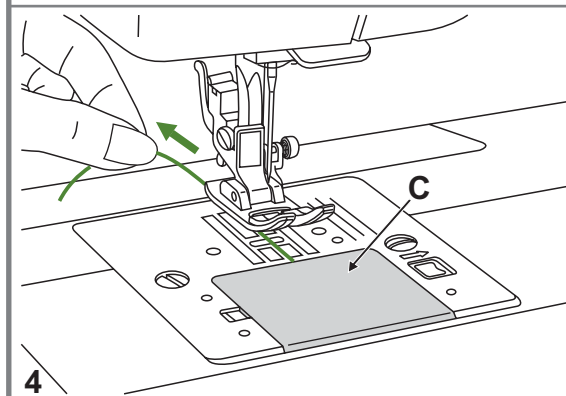
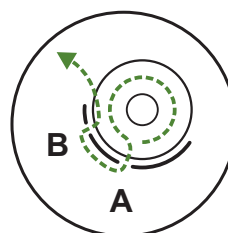
2

2. Pull the thread through the slit (A).



3

3. Pull the thread toward the left and along the inside of the spring until it slips into the notch (B) being sure that the thread does not slip out of the slit (A).



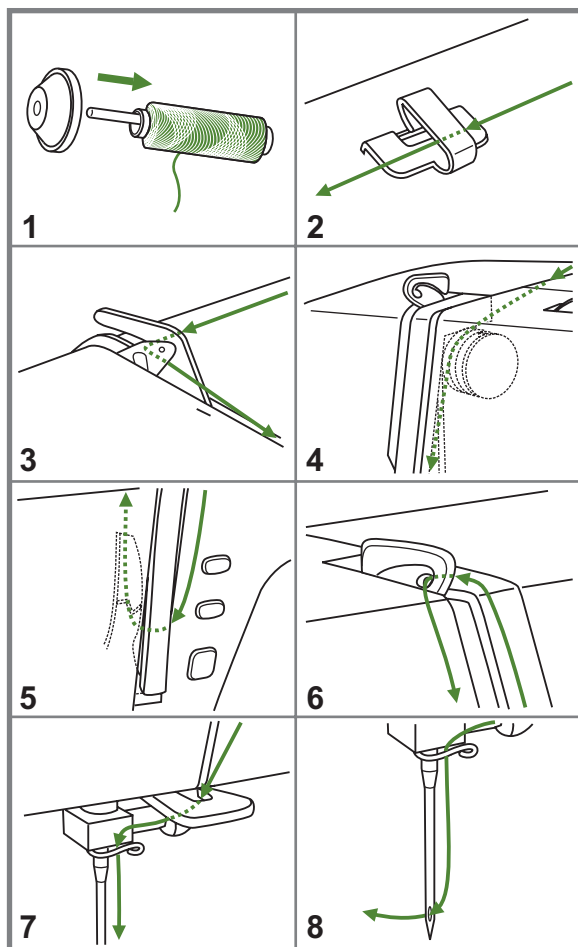
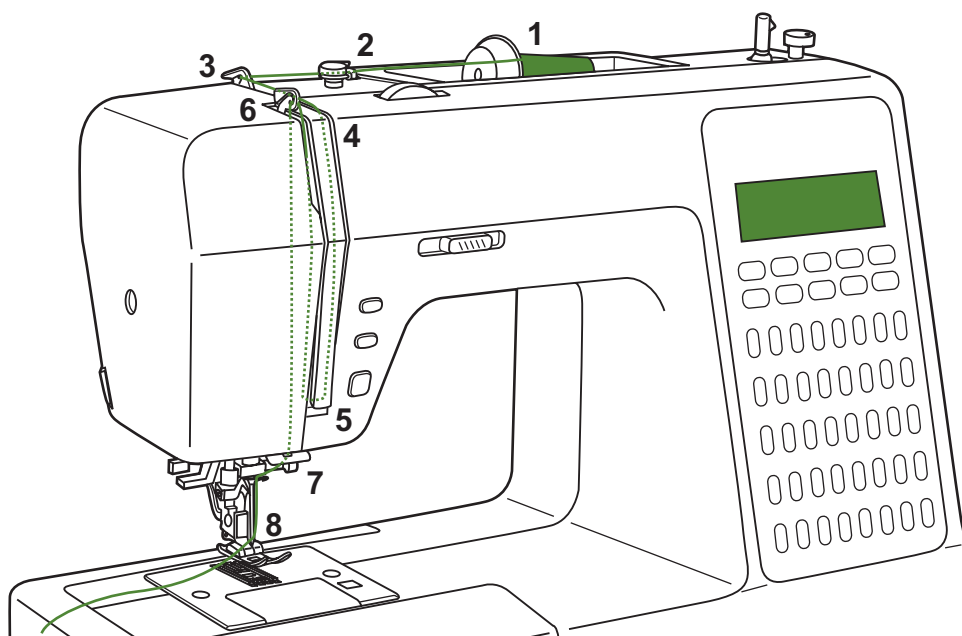
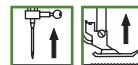
4

4. Pull out about 15 cm (6 inches) of thread and attach the bobbin cover plate. (C)



Attention: Turn power switch to off ("O") before inserting or removing the bobbin.

THREADING THE UPPER THREAD

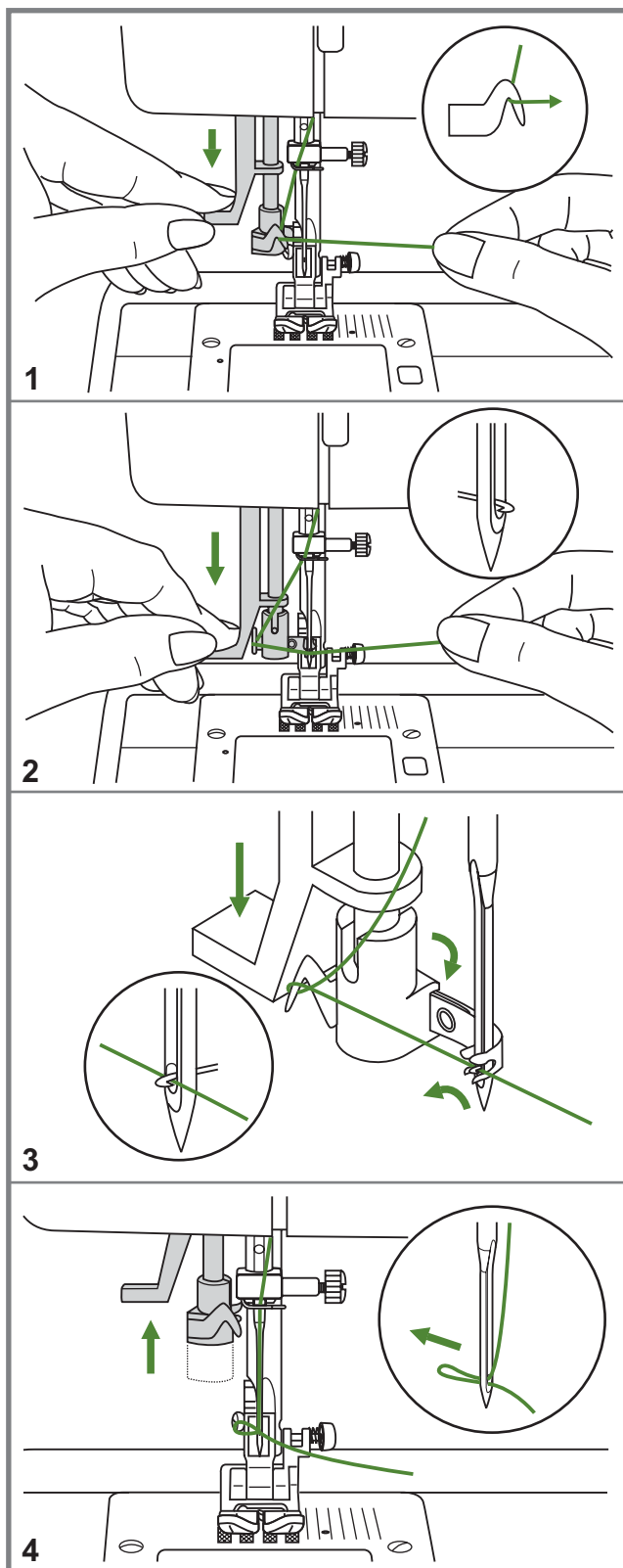
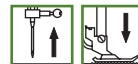


It is important to carry out the threading correctly as by not doing so several sewing problems could result.

Start by raising the needle to its highest point, and also raise the presser foot to release the tension discs.

1. Lift up the spool pin. Place the spool of thread on the spool pin so that the thread comes from the front of the spool place the spool cap at the end of the spool pin.
2. Draw the thread from the spool through the upper thread guide.
3. Guide the thread around the thread guide pulling the thread through the pre-tension spring as illustrated.
4. Thread the tension module by passing the thread between the silver discs.
5. Then, down and around the check spring holder.
6. At the top of this movement, pass the thread from right to the left through the slotted eye of the take-up lever and then downwards again.
7. Pass the thread behind the flat, horizontal thread guide.
8. Now take the thread behind the needle clamp guide and then down to the needle which should be threaded from the front to the back. Pull out about 10cm (4 inches) of thread to the rear beyond the needle eye.

USING THE NEEDLE THREADER



Raise the needle to its highest position.
Lower the presser foot.


1. Lower the needle threader lever slowly and draw the thread through the thread guide as illustrated and then to the right.

2. The needle threader automatically turns to the threading position and the hook pin passes through the needle eye.

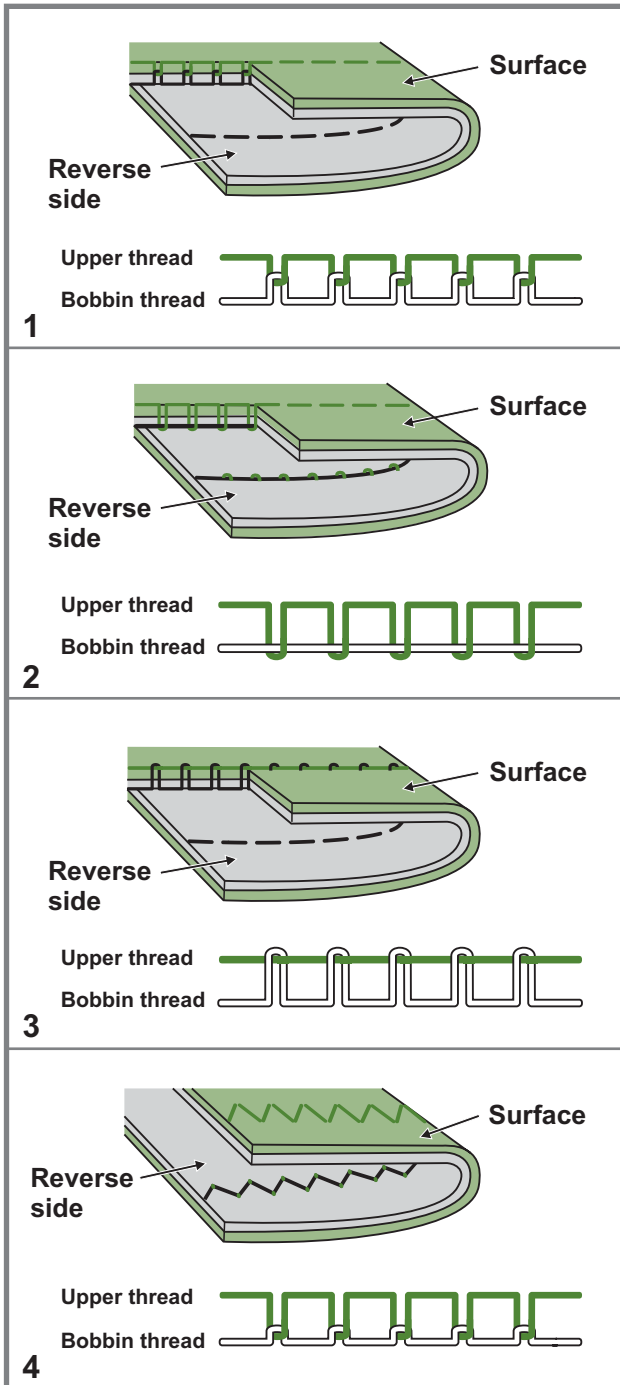
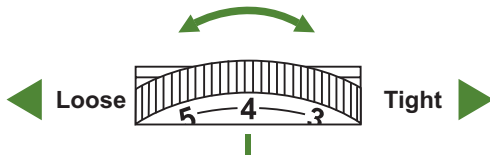
3. Take the thread in front of the needle.

4. Hold the thread loosely and release the lever slowly. The hook will turn and pass the thread through the needle eye in forming a loop.

Pull the thread through the needle eye.

 **Attention:** Turn power switch to the off position ("O").

THREAD TENSION



- Basic thread tension setting: "4"

- To increase the tension, turn the dial to the next number up. To reduce the tension, turn the dial to the next number down.

- Proper setting of tension is important to good sewing.

- There is no single tension setting appropriate for all stitch functions, thread on fabric.

- 90% of all sewing will be between "3" and "5" ("4" is basic setting).

- For all decorative sewing you will always obtain a nicer stitch and less fabric puckering when the upper thread appears on the bottom side of your fabric.

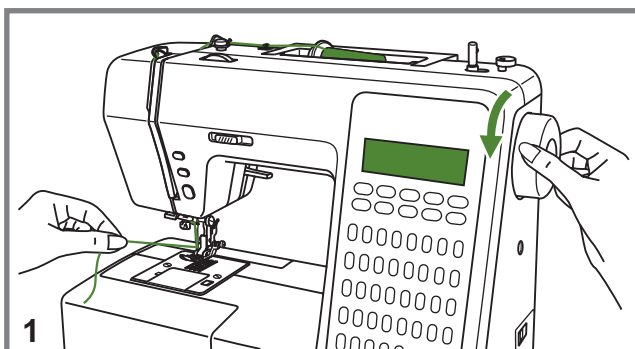
1. Normal thread tension for straight stitch sewing.

2. Thread tension is too loose for straight stitch sewing. Turn dial to higher number.

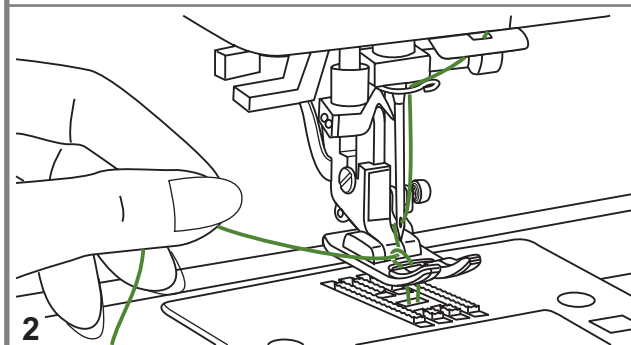
3. Thread tension is too tight for straight stitch sewing. Turn dial to lower number.

4. Normal thread tension for zig zag and decorative sewing.

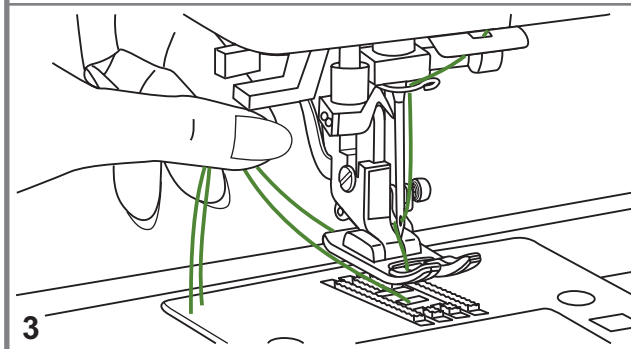
RAISING UP THE LOWER THREAD



1. Hold the upper thread with the left hand. Turn the handwheel towards you (counterclockwise) lowering, then raising the needle.

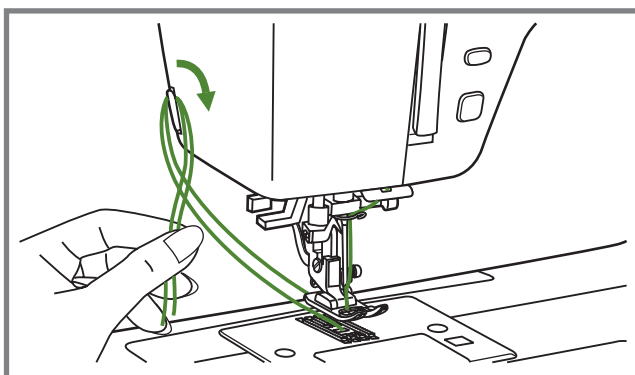
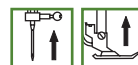


2. Gently pull on the upper thread to bring the bobbin thread up through the needle plate hole. The bobbin thread will come up in a loop.



3. Pull both threads to the back under the presser foot.

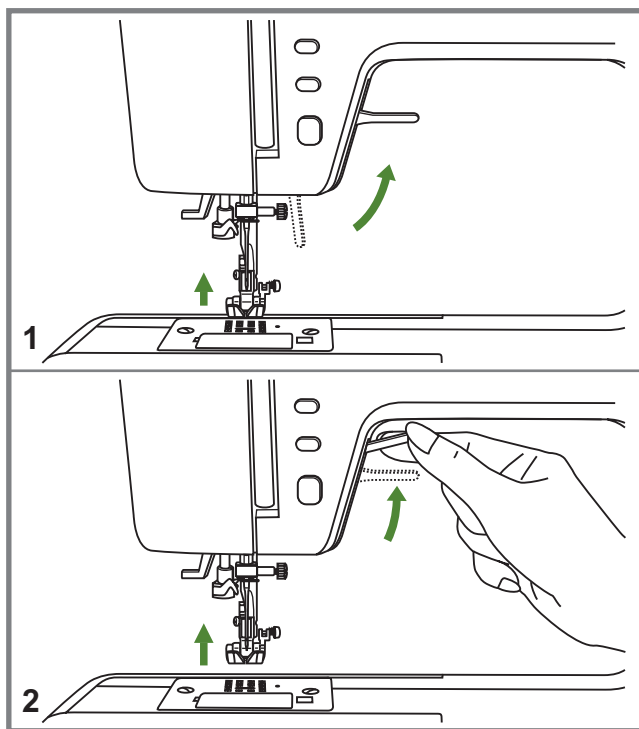
CUTTING THE THREAD



Raise the presser foot. Remove the fabric, draw the threads to the left side of the face cover and cut using the thread cutter.

The threads are cut at the proper length for starting the next seam.

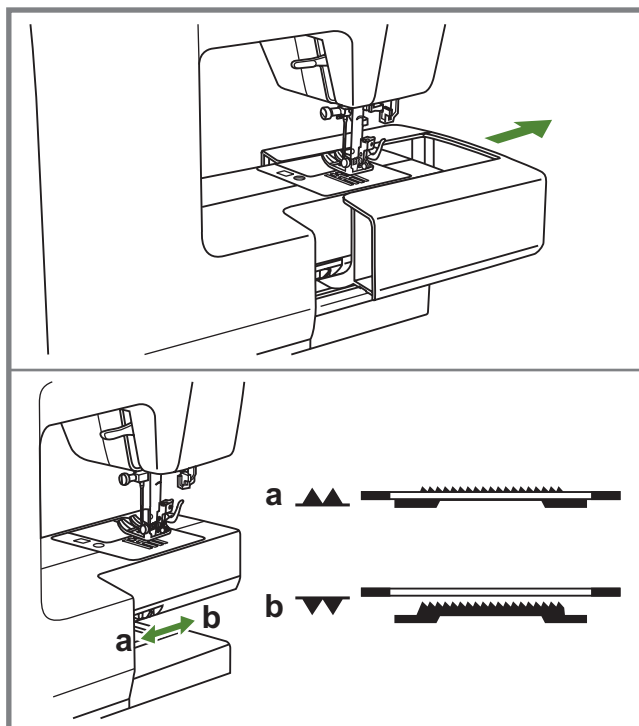
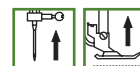
TWO-STEP PRESSER FOOT LIFTER



1. The presser foot lifter raises and lowers your presser foot.

2. When sewing several layers or thick fabrics, the presser foot can be raised a second stage for easy positioning of the work.

TO RAISE OR DROP THE FEED DOGS



With the sewing table off the machine, the feed dog adjustment lever can be seen on the base in back of the sewing machine.

Sliding the lever to the right (b) will lower the feed dog, for example during button sewing. If you wish to continue sewing normally, slide the lever to the left (a) in order to raise the feed dogs.

The feed dog will not rise up if you do not turn the handwheel, even if the lever is slid to the left. Make a complete turn to raise the feed dogs.



MATCHING NEEDLE/ FABRIC/ THREAD

NEEDLE, FABRIC, THREAD SELECTION GUIDE

NEEDLE SIZE	FABRICS	THREAD
9-11 (70-80)	Lightweight fabrics-thin cottons, voile, serge, silk, muslin, Qiana, interlocks, cotton knits, tricots, jerseys, crepes, woven polyester, shirt & blouse fabrics.	Light-duty thread in cotton, nylon, polyester or cotton wrapped polyester.
11-14 (80-90)	Medium weight fabrics-cotton, satin, kettleclote, sailcloth, double knits, lightweight woollens.	Most threads sold are medium size and suitable for these fabrics and needle sizes. Use polyester threads on synthetic materials and cotton on natural woven fabrics for best results. Always use the same thread on top and bottom.
14 (90)	Medium weight fabrics-cotton duck, woolen, heavier knits, terrycloth, denims.	
16 (100)	Heavyweight fabrics-canvas, woollens, outdoor tent and quilted fabrics, denims, upholstery material (light to medium).	
18 (110)	Heavy woollens, overcoat fabrics, upholstery fabrics, some leathers and vinyls.	Heavy duty thread, carpet thread.









































IMPORTANT: Match needle size to thread size and weight of fabric

Note twin needle:

1. Twin needles, can be purchased for utility and decorative work.
2. When sewing with twin needles, the stitch width dial should be set at less than "3.5".
3. Replace needle often (approximately every other garment) and/ or at first thread breakage or skipped stitches.



QUICK ADJUSTMENT REFERENCE CHART












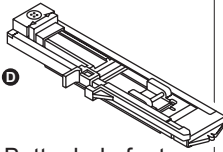


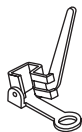









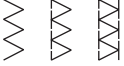







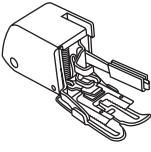




STITCH		LENGTH (mm)		WIDTH (mm)		PRESSER FOOT	FUNCTIONS			
		AUTO	MANUAL	AUTO	MANUAL		REVERSE	AUTO STOP	MIRROR	MEMORY
STRAIGHT STITCH	1 	2.5	0.0~4.5	3.5	0.0~7.0	T(P/K/I)	*	*	*	*
	2 	3.0	1.0~3.0	3.5	1.0~6.5	T(P)	*	*	*	*
	3 	2.5	1.0~3.0	3.5	1.0~6.0	T	*	*	*	*
	4 	2.5	1.0~3.0	3.5	0.5~6.5	T	*	*	*	*
UTILITY STITCH	5 	2.0	0.2~4.5	5.0	0.0~7.0	T(E)	*	*	*	*
	6 	1.0	0.2~4.5	5.0	2.5~7.0	T(M)	*	*	*	*
	7 	2.5	1.0~3.0	5.0	2.5~7.0	T(A)		*	*	*
	8 	2.5	1.0~3.0	5.0	2.5~7.0	E		*	*	*
	9 	2.5	1.0~3.0	5.0	2.5~7.0	T		*	*	*
	10 	3.0	1.0~3.0	3.5	2.5~7.0	T		*	*	*
	11 	2.0	0.5~4.5	3.5	2.5~7.0	F		*	*	*
	12 	1.0	0.5~4.5	3.5	2.5~7.0	F		*	*	*
	13 	3.0	1.0~3.0	5.0	2.5~7.0	T(A)		*	*	*
BUTTONHOLE SEWING STITCH	14 	0.5	0.2~1.0	5.0	2.5~7.0	D				
	15 	0.5	0.2~1.0	5.0	2.5~5.5	D				
	16 	0.5	0.2~1.0	7.0	5.5~7.0	D				
DARNING STITCH	17 	2.5	1.5~3.0	7.0	0.0~7.0	T				
BLOCK STITCH	18 	0.5	0.2~2.5	7.0	2.5~7.0	A		*	*	*
	19 	0.5	0.2~2.5	7.0	2.5~7.0	A		*	*	*
	20 	0.5	0.2~2.5	7.0	2.5~7.0	A		*	*	*
	21 	0.5	0.2~2.5	7.0	2.5~7.0	A		*	*	*
	22 	0.5	0.2~2.5	7.0	2.5~7.0	A		*	*	*
	23 	0.5	0.2~2.5	7.0	2.5~7.0	A		*	*	*
	24 	0.5	0.2~2.5	7.0	2.5~7.0	A(M)		*	*	*
	25 	3.0	1.0~3.0	7.0	2.5~7.0	A		*	*	*
PRACTICAL STITCH	26 	3.0	1.0~3.0	7.0	2.5~7.0	A(T)		*	*	*
	27 	3.0	1.0~3.0	7.0	2.5~7.0	A(T)		*	*	*
	28 	2.5	1.0~3.0	5.0	2.5~7.0	A		*	*	*
	29 	3.0	1.0~3.0	7.0	2.5~7.0	A(T)		*	*	*
	30 	3.0	1.0~3.0	7.0	2.5~7.0	A(T)		*	*	*
	31 	2.5	1.0~3.0	7.0	2.5~7.0	A(T)		*	*	*
	32 	2.5	1.0~3.0	7.0	2.5~7.0	A(T)		*	*	*
	33 	2.5	1.0~3.0	7.0	2.5~7.0	T		*	*	*
	34 	3.0	1.0~3.0	7.0	2.5~7.0	T(A)		*	*	*
	35 	2.5	1.0~3.0	5.0	2.5~7.0	A		*	*	*
	36 	2.0	1.0~3.0	7.0	2.5~7.0	A		*	*	*
	37 	2.5	1.0~3.0	5.0	2.5~7.0	A		*	*	*
	38 	2.5	1.0~3.0	7.0	2.5~7.0	T(A)		*	*	*
	39 	2.5	1.0~2.5	7.0	2.5~7.0	A		*	*	*
	40 	2.5	1.0~3.0	5.0	2.5~7.0	A(M)		*	*	*

*: Adjustments can be made.



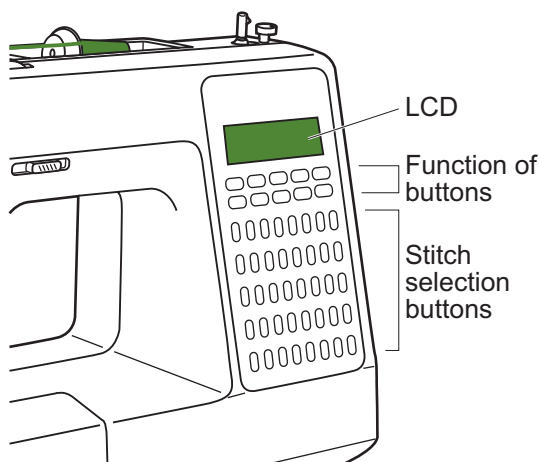
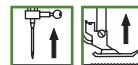
TYPE OF PRESSER FOOT CHART

(double is being suggested for certain stitches for more creativity)

PRESSER FOOT	APPLICATION	NEEDLE	PRESSER FOOT	APPLICATION	NEEDLE
 T All purpose foot (T)	General sewing, Patchwork stitches, Decorative stitching, Smocking, Fagoting, etc.		 A Satin stitch foot (A)	Satin stitch 	
 I Zipper foot (I)	Inserting zippers 		 P Quilting foot (P)	Quilting 	
 D Buttonhole foot (D)	Buttonhole 		 Darning/ Embroidery foot	Darning Free embroidery Monogramming 	
 M Cording foot (M)	Cording 		 Gathering foot	Gathering 	
 E Overcasting foot (E)	Overcasting 		 Button sewing foot	Button sewing 	
 F Blind hem foot (F)	Blind hem 		 Walking foot (Optional)	This foot helps to prevent uneven feeding of very difficult fabrics	
 K Hemmer foot (K)	Narrow hemming 				

Note: When sewing with twin needles, the stitch width dial should be set at less than "3.5".

SELECTING A STITCH

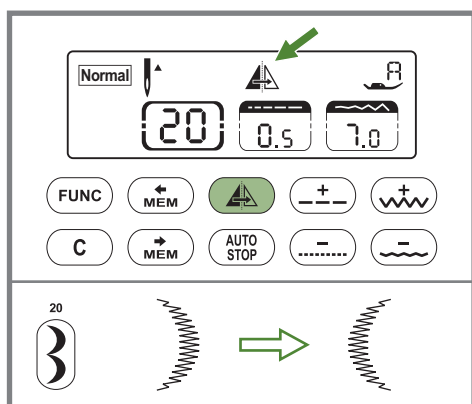
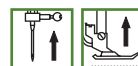



When you turn the machine "ON" it always selects the straight stitch and the number is displayed. You select a different stitch by pressing the corresponding stitch button. The LCD screen will display the selected stitch number and the suggested settings.




You can set the sewing functions according to the fabric and the sewing purpose. For example, you can use the function buttons to adjust the stitch length and stitch width, select the mirror function or auto-stop. The LCD screen also shows you the suitable presser foot for the stitch selected.

MIRROR

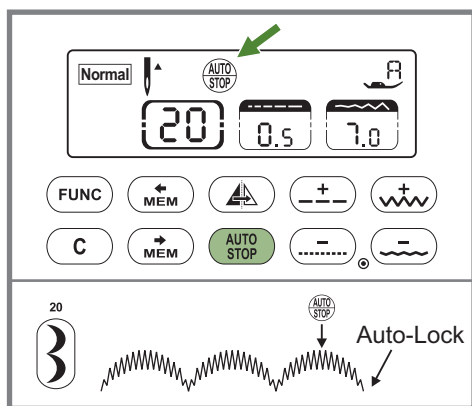
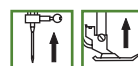




Pressing the  will sew a reflection pattern from your selected stitch. The LCD will display the mirror function and the machine will continue to sew the reflected pattern until the mirror function is pressed again to cancel the mirror function. When the mirror function disappears from the LCD screen, the machine will continue to sew the normal stitch.

If you change the pattern setting, then the mirror function will be cancelled accordingly. If you need the reflection pattern, then press the mirror button again.

 **Attention:** The mirror function will not available for pattern 14~17.

AUTO-STOP

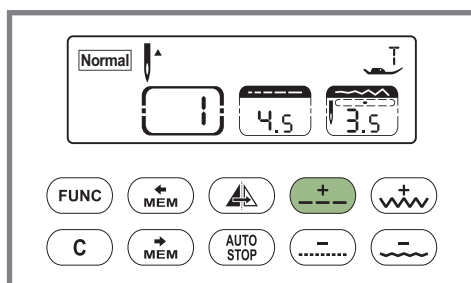
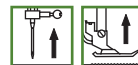


Using the Auto-Stop function will allow you to stop with complete pattern after sewing the same pattern continuously. When the  is pressed, the machine will sew few locking stitches at the end of the current pattern and stop automatically. You can set the auto-stop function while sewing and the machine will stop after one unit of the pattern or press before starting to sew and the machine will sew 1 unit of the pattern only. When you press the auto-stop function, the LCD screen will display the figure . After the machine had stop, just press the foot control again to continue sewing.

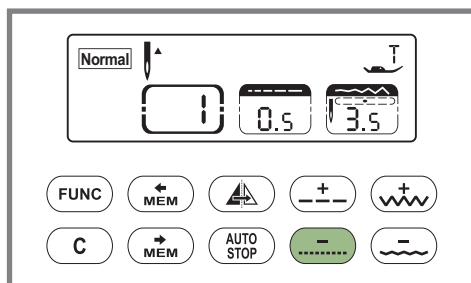
If you change your pattern selection, the Auto-Stop function will be cancelled accordingly. If you need the function for the current pattern, press the Auto-Stop button

 **Attention:** The Auto-Stop function will not available for pattern 14~17.

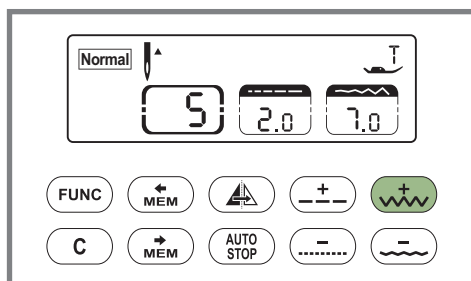
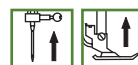
ADJUSTING THE STITCH LENGTH



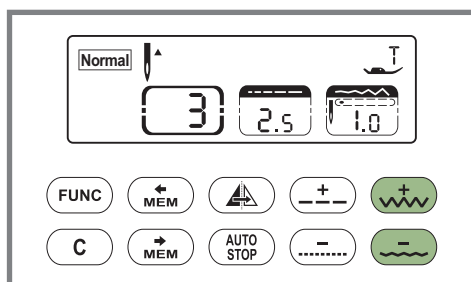
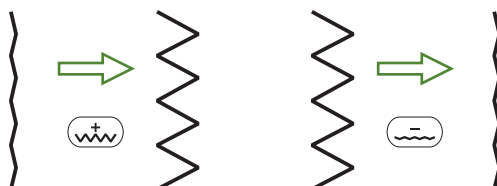
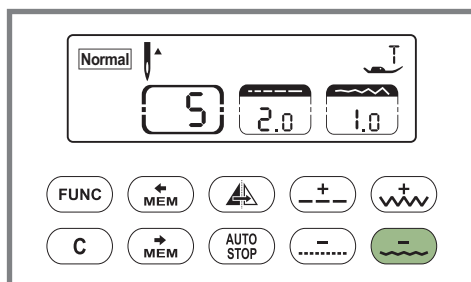
When you select a stitch the machine will automatically set the recommended stitch length which will be indicated by numbers on the LCD screen. The stitch length can be adjusted by pressing the stitch length adjustment buttons. To shorten the stitch length, press the button. For a longer stitch length, press the button. The stitch length can be adjusted between "0.0" ~ "4.5". Certain stitches have a limited length.



ADJUSTING THE STITCH WIDTH/ NEEDLE POSITION



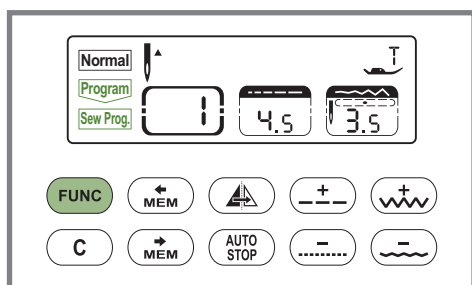
When you select a stitch, the machine will automatically set the recommended stitch width, which will be indicated by numbers on the LCD screen. The stitch width can be regulated by pressing the stitch width adjustment buttons. For a narrower stitch, press the button. For a wider stitch, press the button. The stitch width can be adjusted between "0.0" ~ "7.0". Certain stitches have a limited stitch length.



When the straight stitch patterns (patterns 1~4) has been selected, the needle position is regulated by the stitch width adjustment buttons. Pressing the button, will move the needle to the left and pressing the button, will move the needle to the right. On the LCD screen, the needle position will be shown as a point above the numbers. The numbers will be changed from left position "0.0" to extreme right position "7.0". The pre-set center needle position will be indicated as "3.5".



MEMORY

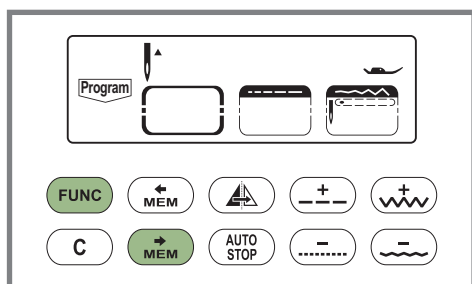


When you turn the machine "on", the LCD screen displays **Normal**. Touch the **FUNC** button to **Program** for programming. If you touch the function button again, **Sew Prog.** will be displayed to allow sewing your programmed stitches. After a third touch, **Normal** is displayed again.

Program

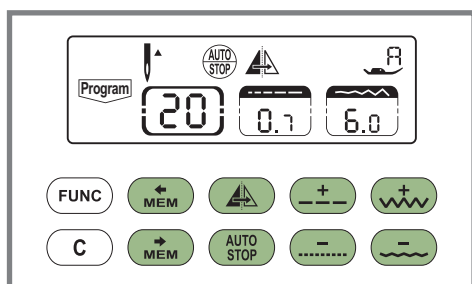
Note:

- The machine has a program memory that can retain 30 units of stitches.
- You can continue your programming even after having pressed Auto-Stop. Then, when sewing, the machine stops automatically and locks the thread in each position where you have.
- Your machine will hold what you have programmed even when it is switched off.



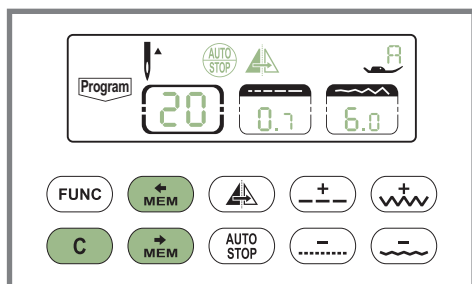
Programming

1. Press **FUNC** for **Program** position.
2. Select the first pattern you want to enter (You can change the stitch length, width, choose the Auto-Stop or mirror function if desired) then press the **MEM** button to select next pattern.
3. Use the **MEM** button or **MEM** button to check what you have programmed.



Corrections

If you wish to change a stitch to another one in your program, press **MEM** button or **MEM** button until the stitch number you have selected is displayed. Select the new stitch or change the stitch length, width, Auto-Stop or mirror if desire.

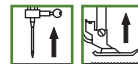


Cancel

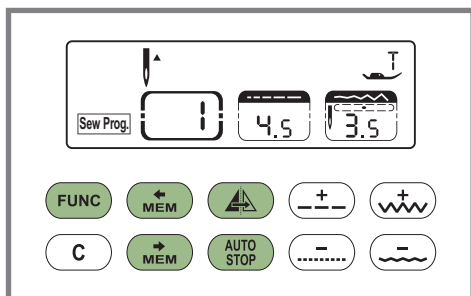
If you wish to delete a certain stitch within the program, use the **MEM** button or **MEM** button until the actual stitch number is displayed and press **C**. The stitch and following patterns will be deleted.

If you wish to delete the whole program, press the **FUNC** button to return **Program**. The machine will be positioned at the first program **C** stitch. Press button.

Note: If you mistake press **C** button, simply press **C** button again to bring back the balance of your program as long as you have not used another button.



Sew Prog.



1. Press **(FUNC)** for **[Sew Prog.]** position. The machine will be positioned at the first programmed stitch.
2. Press foot controller. The machine will start to sew from first entered pattern. On the LCD screen, sewing stitch data is indicated.
3. If you wish to check what is programmed or if you wish to start sewing a few stitches into the program, use the **(+ MEM)** button or **(- MEM)** button


4. You can use the Auto-Lock  function when the sewing machine is stopped.


! Attention: The Auto-Lock can not be set if one of the pattern 1~4 is being selected as the first programmed stitch.


5. You can continue your programming even after having pressed **(AUTO STOP)**. Then, when sewing, the machine stops automatically and fastens the thread in every position where you have programmed Auto-Stop. Just press the foot control again and the machine will sew the rest of what you have programmed.
6. If you wish to repeat your stitch combination without having the machine stop press the **(AUTO STOP)** button to cancel the Auto-Stop in **[Program]** position. The **(AUTO STOP)** will disappear from the LCD screen.
7. If you should forget to enter the Auto-Stop function in **[Program]** position it is also possible to use the Auto-Stop button in **[Sew Prog.]** position. But the Auto-Stop function will not be memorized in the program.


Sewing sample


Press the **(FUNC)** button to **[Sew Prog.]** position. Press **(C)** to empty the memory. Select any stitches you wish with the exception of pattern 14~17. This way you can combine different stitches according to your own taste and imagination. Press the **(FUNC)** button to the **[Sew Prog.]** position to sew your program. The machine will be positioned at the first programmed stitch. Press the foot control to begin sewing. You can try the memory program illustrated below.









 **(FUNC)** **[Program]**

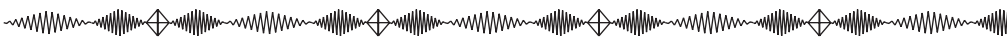
 Sewing sample












 LCD screen


 Programming direction













ex.1 


       


ex.2 

ex.3 

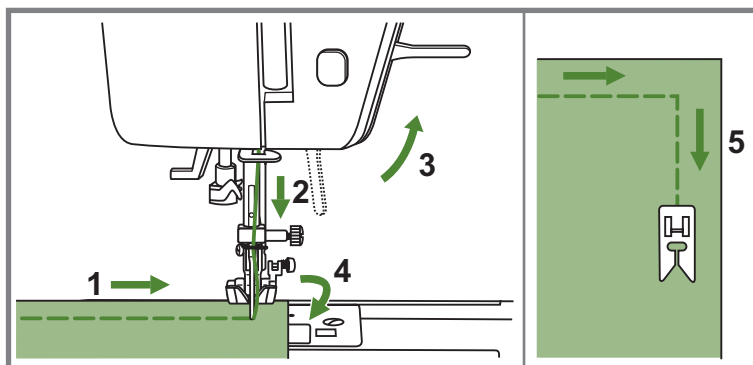
           

 **(FUNC)** **[Sew Prog.]**

 Start to sewing

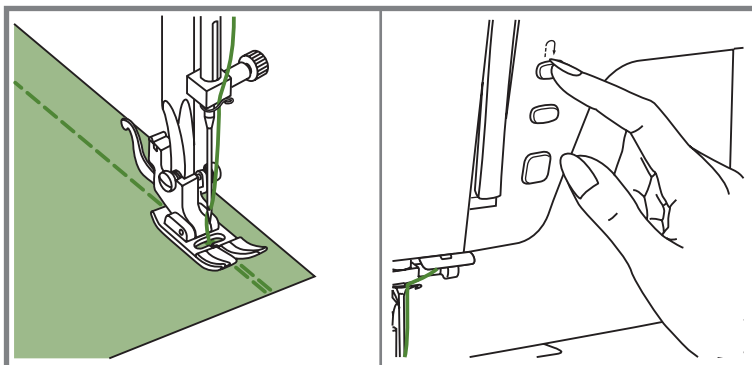
USEFUL SKILLS

Sewing corners




1. Stop the sewing machine when you reach a corner.
2. Lower the needle into the fabric.
3. Raise the presser foot.
4. Use the needle as a pivot and turn the fabric.
5. Lower the presser foot and resume sewing.

Reverse

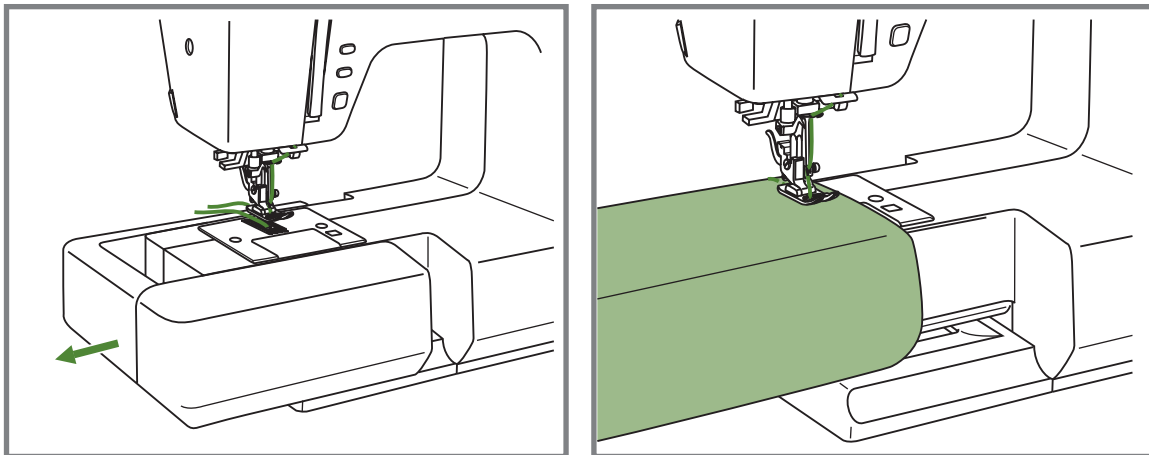


Reverse stitching is used to secure the threads at the beginning and at the end of a seam.

Press the reverse button and sew 4~5 stitches. The machine will sew forward when the button is released.

 **Attention:** The reverse button can only be used for patterns 1~6.

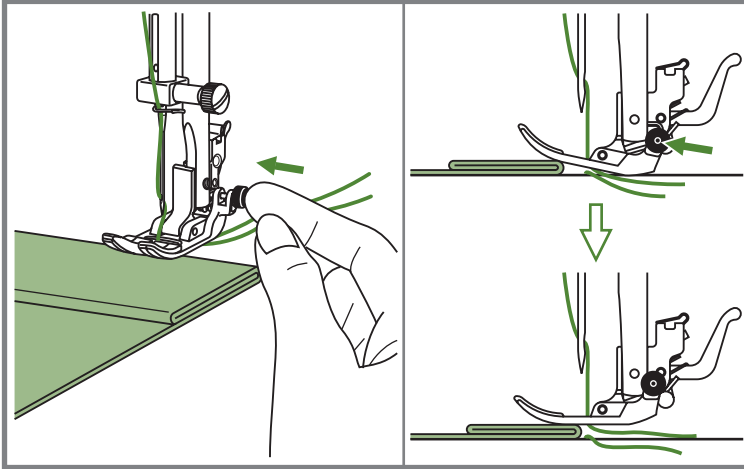
Free arm



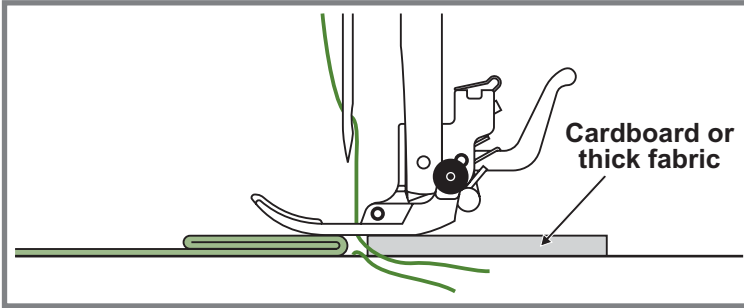
Free-arm sewing is convenient for sewing tubular areas such as pant hems and cuffs.

USEFUL SKILLS

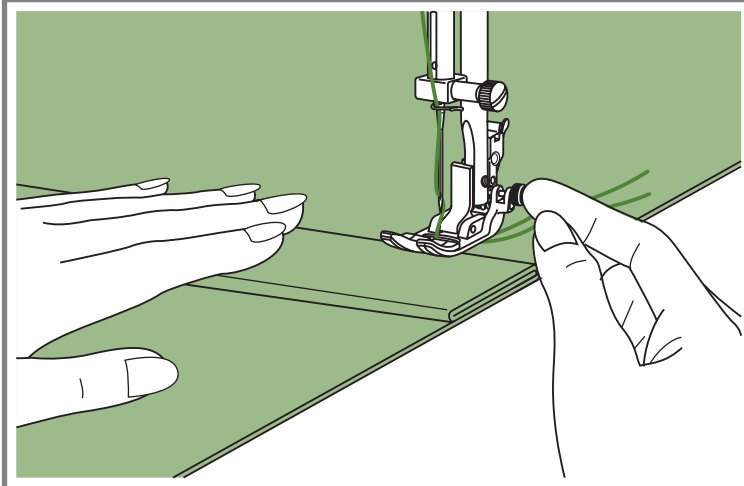
Sewing on the heavy fabric



The black button on the right side of the presser foot will lock the presser foot in a horizontal position if you push it in before lowering the presser foot. This ensures even feeding at the beginning of a seam and helps when sewing multiple layers of fabric such as sewing over seams when hemming jeans.



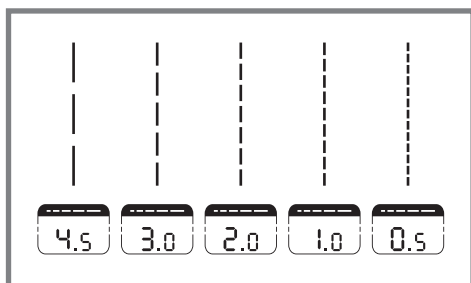
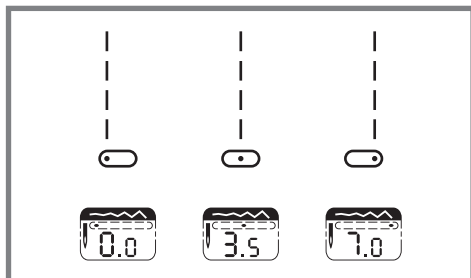
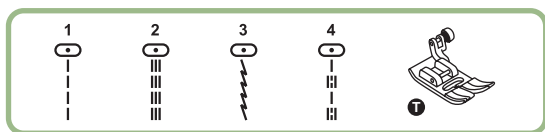
When you reach the point of an increased thickness, lower the needle and raise the presser foot. Press the toe of the foot and push in the black button, then lower the foot and continue sewing.



The black button releases automatically after sewing few stitches.



You also can place another piece of fabric with the same thickness at the back of the seam. Or support the presser foot while feeding by hand and sewing toward the folded side.

STRAIGHT STITCHES AND NEEDLE POSITION





Change the needle position

These settings apply only to "straight" stitch patterns 1~4. The machine will sew 3 locking stitches automatically when you are starting any of the pattern 1~4.

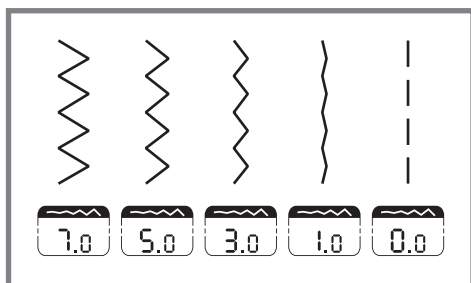
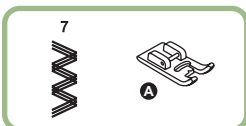
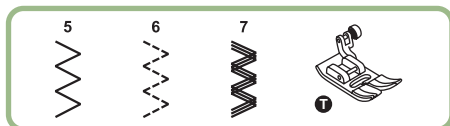
The pre-set position is "3.5", center position. When you press , the needle position will move to the left. When you press , the needle position will move to the right. On the LCD screen, the point illustration and the number indicate the needle position.

Changing the stitch length


To shorten the stitch length, press the  button. For a longer stitch length, press the  button.

If you are sewing on very fine (thin) fabric and you want to use a long stitch length. The stitch length will be set automatically to a maximum length of "4.0" even if you select "4.5".

ZIGZAG STITCHES



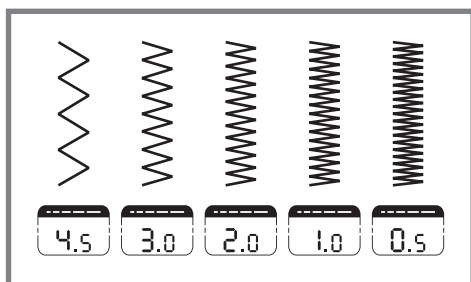
Adjusting the stitch width

The maximum zigzag stitch width for zigzag stitching is "7"; however, the width can be reduced on any patterns. The width increases as you press the zigzag  button from "0" - "7.0".



Attention:

For twin needle sewing, never set the width wider than "3.5".



Adjusting the stitch length

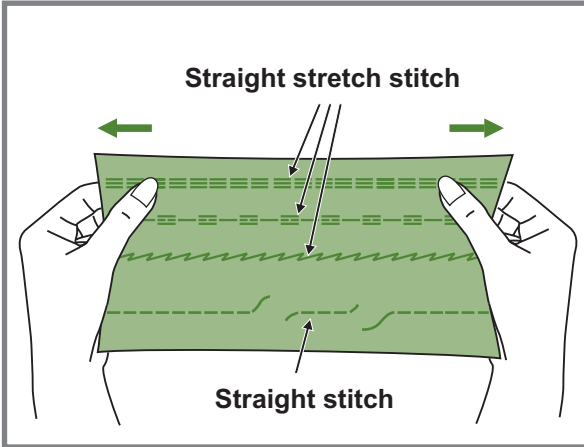
The density of zigzag stitches increase as the setting of stitch length dial approaches "0".

Neat zigzag stitches are usually achieved at "1.0" - "2.5".

Closed up zigzag stitches (close together) are referred to as a satin stitch.

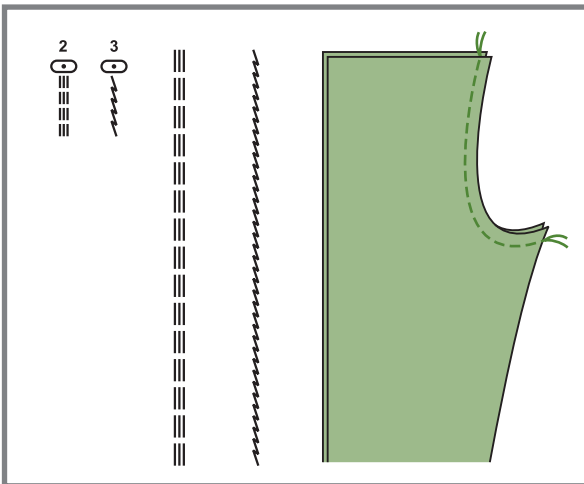


STRETCH STITCH

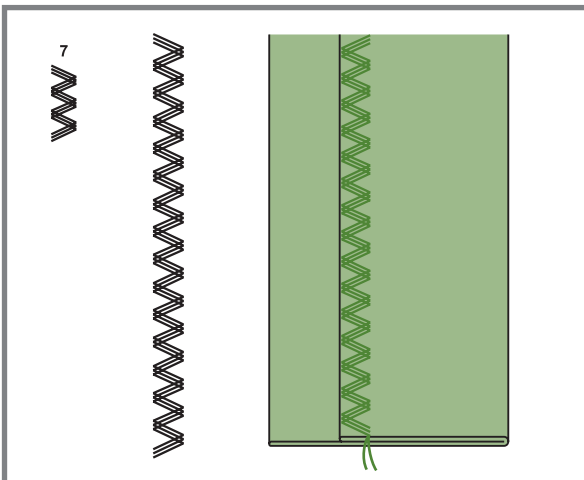


It assures you of a stitch that is strong and flexible and will give with the fabric without breaking. Good for easy to ravel and knit fabrics. It is good for joining durable fabric such as denims.

These stitches can also be used as a decorative top stitch.



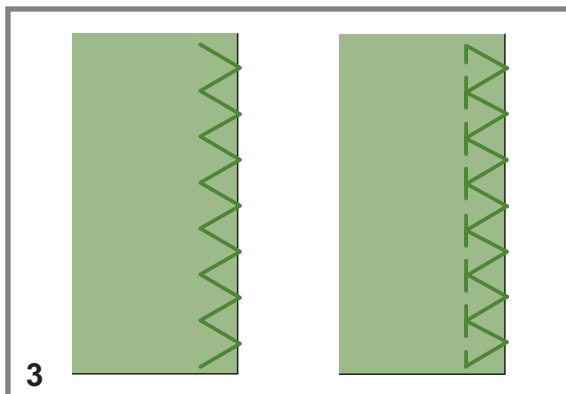
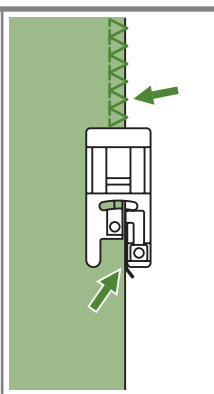
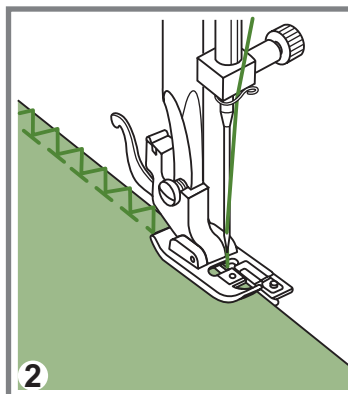
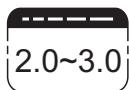
Straight stretch stitch is used to add triple reinforcement to stretch and hardwearing seams.



Triple zigzag stretch stitch is suitable for firm fabrics like denim, poplin, duck, etc.

OVERCASTING STITCHES

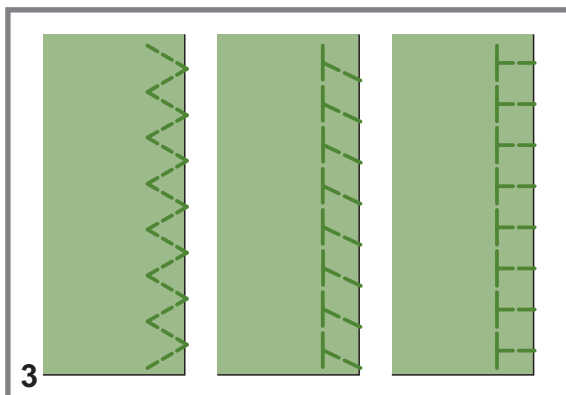
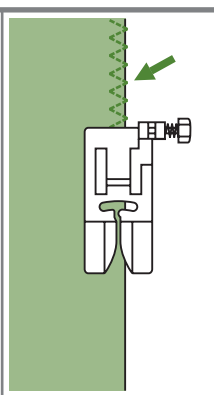
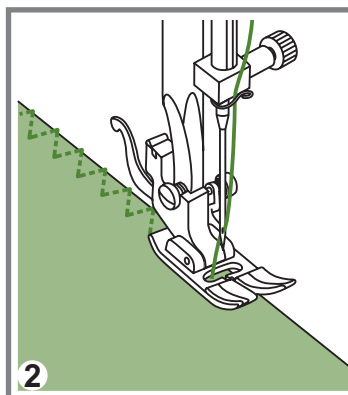
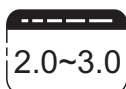
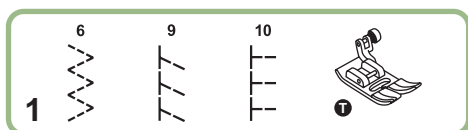
Using the overcasting foot



1. Change presser foot to overcasting foot.
2. Sew the fabric with the fabric edge against the guide of the overcasting foot.

Attention: The overcasting foot should be used to sew with patterns 5 and 8 only and do not set the stitch width narrower than "5.0". It is possible that needle could hit the presser foot and break when sewing other patterns and width.

Using the all purpose foot



1. Change presser foot to all purpose foot.
2. Sewing the overcasting along the edge of the fabric so that the needle drops over the edge of the fabric on the right side.

BLIND HEM/ LINGERIE STITCH

11



12



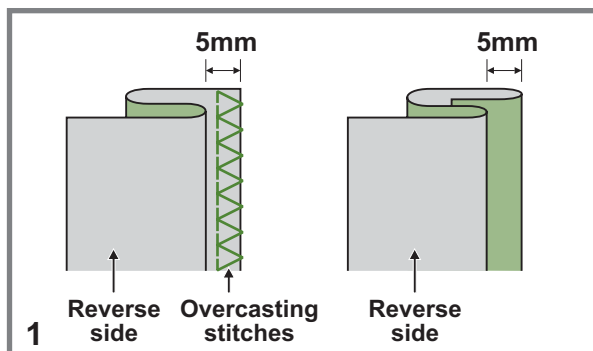
1.0~2.0

2.5~4.0

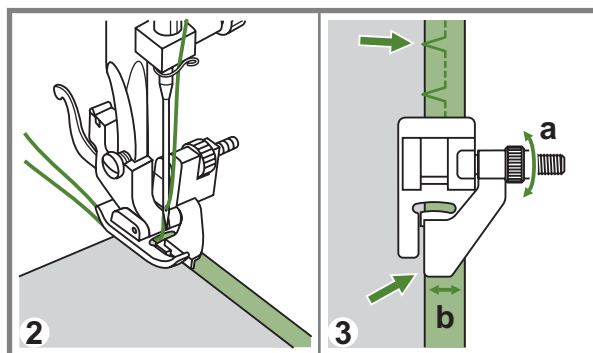
11: Blind hem/lingerie for firm fabrics

12: Blind hem for stretch fabrics

Note: It takes practice to sew blind hems. Always make a sewing test first.

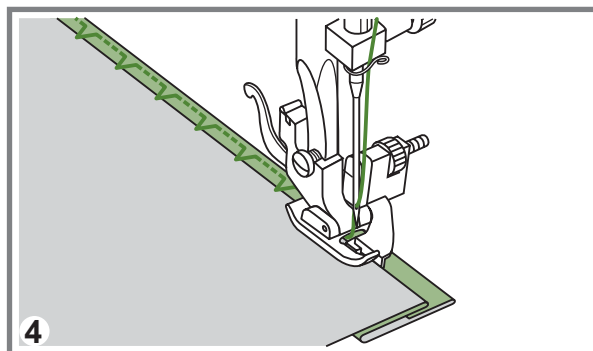


1. Fold the fabric as illustrated with the wrong side uppermost.

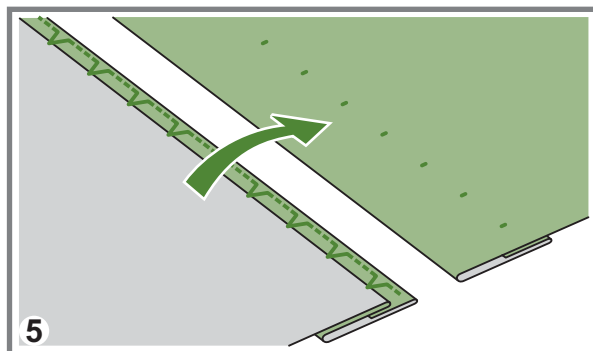


2. Place the fabric under the foot. Turn the handwheel forwards by hand until the needle swings fully to the left. It should just pierce the fold of the fabric. If it does not, adjust the stitch width accordingly.

3. Adjust the guide (b) by turning the knob (a) so that the guide just rests against the fold.



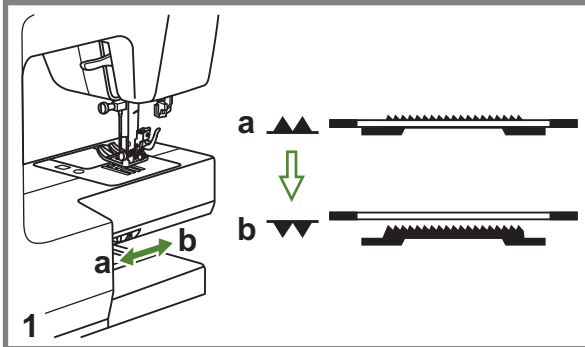
4. Sew slowly, guiding the fabric carefully along the edge of the guide.



5. Turn over the fabric.

BUTTON SEWING

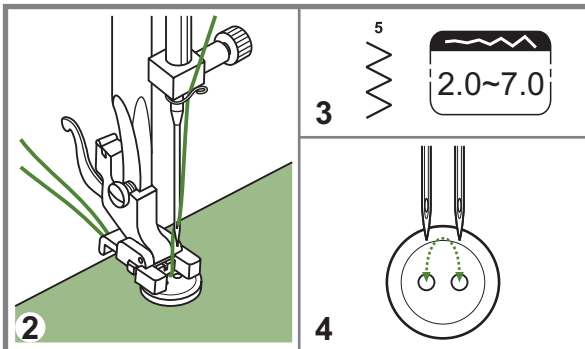
5



Change presser foot to the button sewing foot.

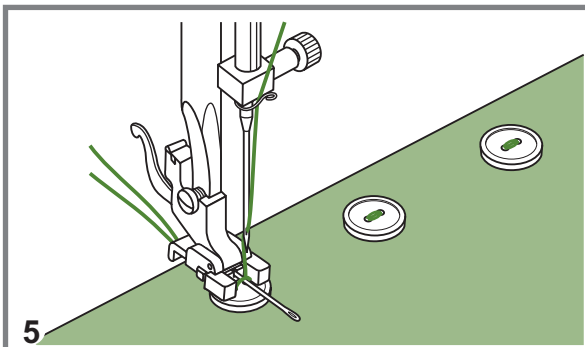
1. Move the drop feed control to ▼▼ to lower the feed dogs. (Note: Stitch length cannot be controlled with stitch length adjustment.)

2. Position the work under the foot. Place the button in the desired position, lower the foot.



3. Select zig zag pattern. Adjust the stitch width to "2.0" ~ "7.0" according to the distance between the two holes of the button.

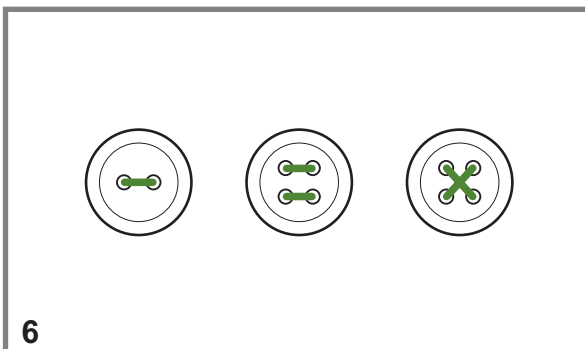
4. Turn the handwheel to check that the needle goes cleanly into the left and right holes of the button.



5. Before sewing, press the Auto-lock button to sew reinforcement stitches automatically at the beginning and at the end of the stitch.

If a shank is required, place a darning needle on top of the button and sew.

6 For buttons with 4 holes, sew through the front two holes first, push work forward and then sew through the back two holes.



BUTTONHOLE STITCHING

14

0.3~0.7

3.0~7.0

15

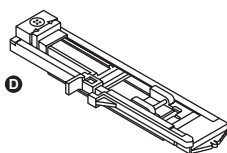
0.4~0.6

3.5~5.5

16

0.3~0.6

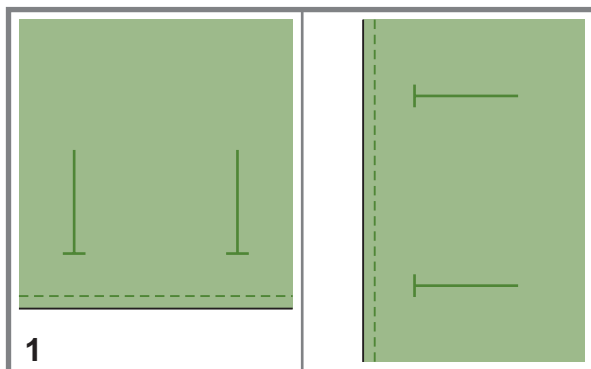
5.5~7.0



14: For thin or medium fabric

15: For horizontal holes on blouses or shirts made from thin or medium fabric

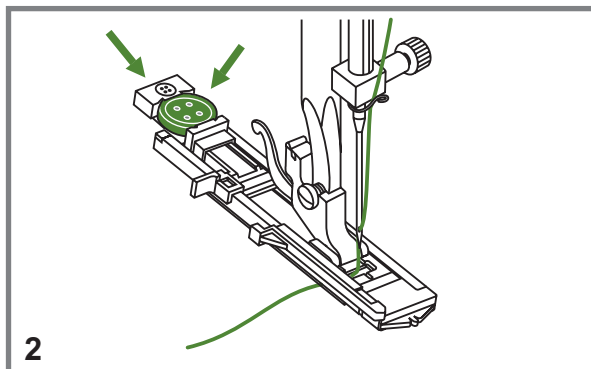
16: For suits or overcoats



Note: Before sewing a buttonhole on your project, practice on a scrap piece of the same type of fabric.

1. Mark the positions of the buttonhole on the fabric.

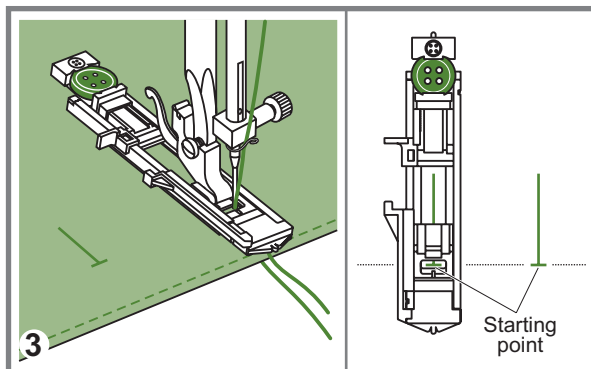
The maximum buttonhole length is 3cm. (Total of diameter + thickness of button.)



2. Attach the buttonhole foot, then pull out the button holder plate and insert the button. The size of the buttonhole is determined by the button inserted in the button plate.

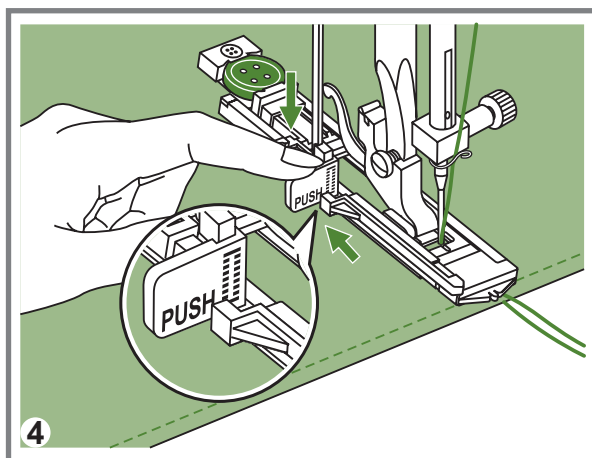
Set the buttonhole stitch. Adjust stitch width and length to desired width.

The thread should be passed through the hole in the presser foot, then be placed under the foot.




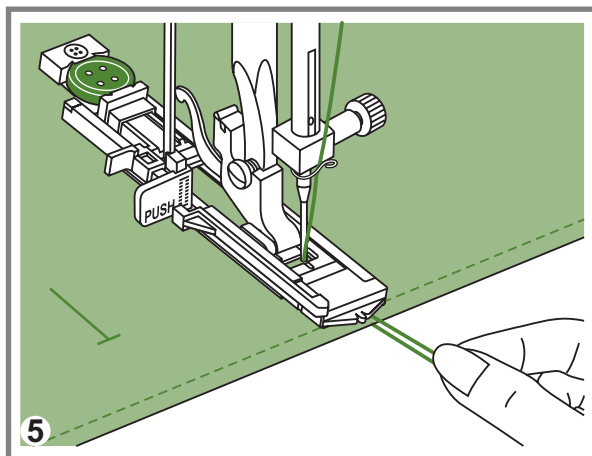
3. Select the buttonhole stitch. Adjust the stitch width and the stitch length to the desired width and density.

BUTTONHOLE STITCHING



- Position the fabric under the presser foot so that the centerline's mark is aligning with the center of the buttonhole foot. Lower the buttonhole foot.

Note: When you select any buttonhole pattern, LCD screen will be demonstrated the figure , it is to remind you to lower the buttonhole lever.

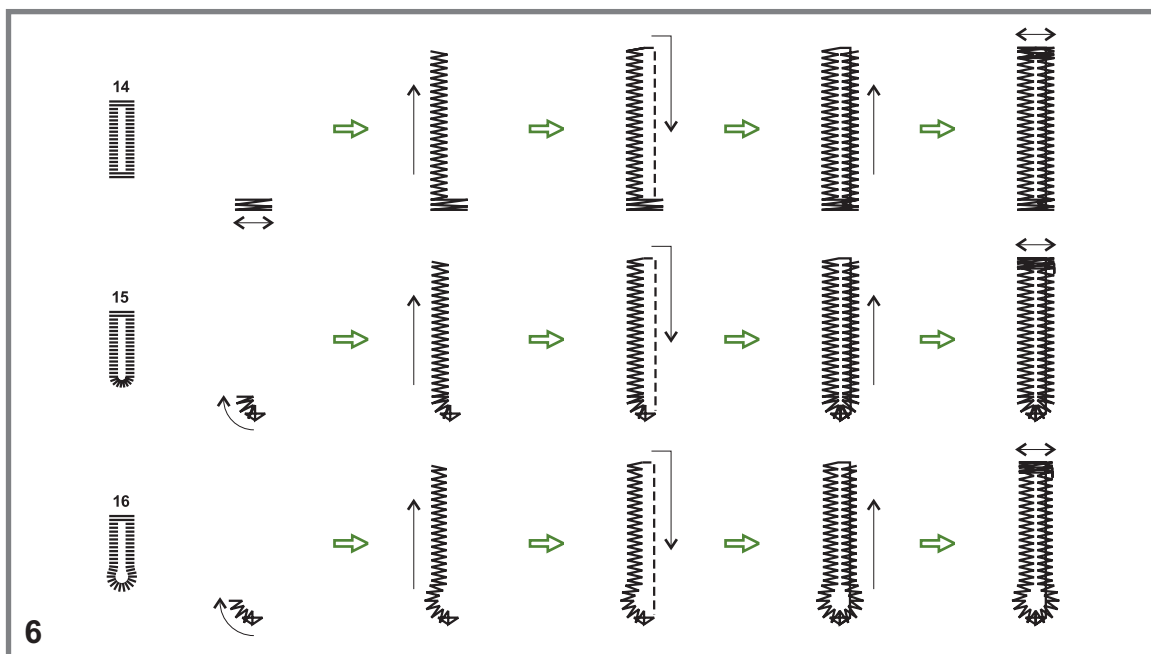


- While lightly holding the end of upper thread and start sewing.

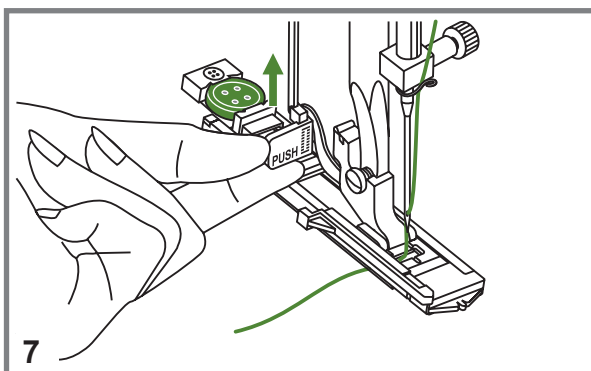
Note: Gently feed the fabric by hand. Before stopping, the machine will automatically sew a reinforcement stitch after the buttonhole is sewn.

- Lightly holds the end of the upper thread and start sewing.

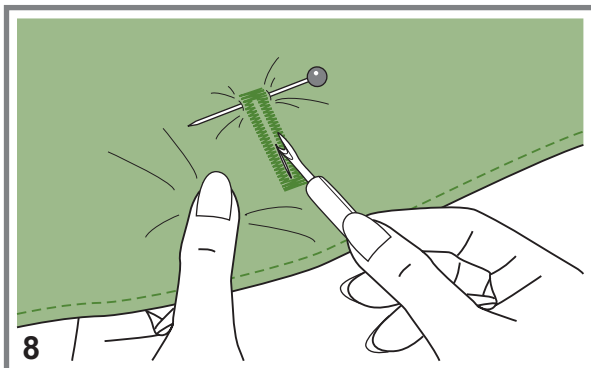
Note: If you have moved the fabric before completing the buttonhole, you must select another stitch and returned to the buttonhole setting after. The machine will return to the starting position of the buttonhole stitch. You can restart to sew.



BUTTONHOLE STITCHING

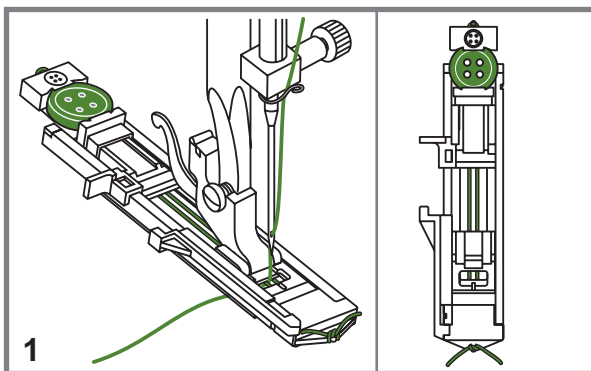


7. Raise the presser foot and cut thread. To sew over same buttonhole, raise presser foot (will return to original position). After sewing the buttonhole stitch, raise the buttonhole lever until it stops.



8. Cut the center of the buttonhole being careful not to cut any stitches on either side. Use a pin as a stopper at the bartack so you do not cut too much.

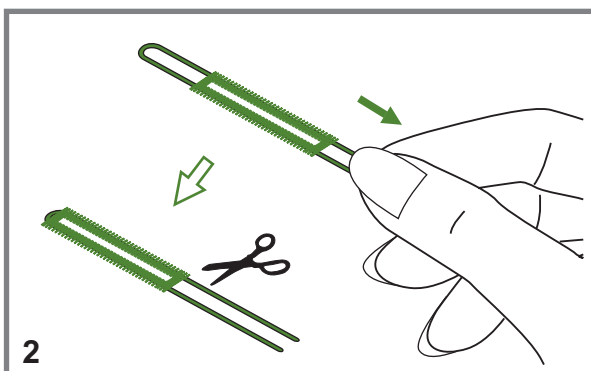
Making a buttonhole on stretch fabrics



When sewing buttonholes on stretch fabric, hook heavy thread or cord under the buttonhole foot.

1. Attach the buttonhole foot and hook the gimp thread onto the back of the presser foot. Bring the two gimp thread ends to the front of the foot and insert them into the grooves, then temporarily tie them there. Lower the presser foot and start sewing.

Set the stitch width to match the diameter of the gimp thread.



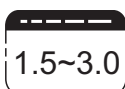
2. Once sewing is completed, pull the gimp thread gently to remove any slack, then trim off any excess.

Note: It is suggested that you use interfacing on the backside of the fabric.

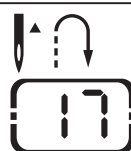
DARNING

17

AAAA
BBBBB
CCCCC
DDDDD
EEEE
FFFFF



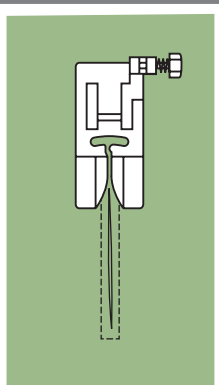
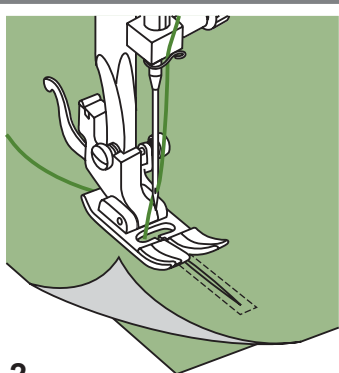
Normal



1

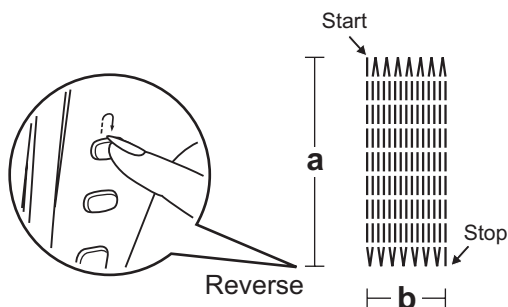
1. Press pattern 17 to get the darning stitch. Chang the presser foot to the all-purpose foot.

2



2. Baste the upper fabric and the under fabric together. Select the needle position. Lower the presser foot over the center of the tear.

3



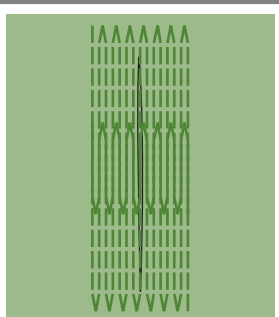
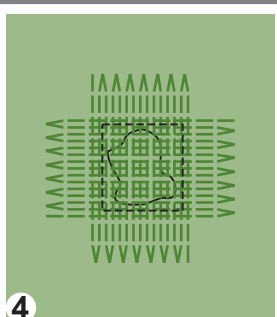
3. Sew until the stitch has reached the desired length. Touch the reverse button. The machine now completes the pattern after sewing 15 even lines.

a The length of sewing.

b The width of sewing.

Notes: Normally, for the darning the needle position can be settled between "3.0" ~ "7.0" by pressing the stitch width adjustment buttons. The width of the sewing is controlled by the position of the needle.

4



4. If the sewing range is too big to sew, then we suggest you can sew several times (or cross sew) to get better sewing result.

FAGOTING

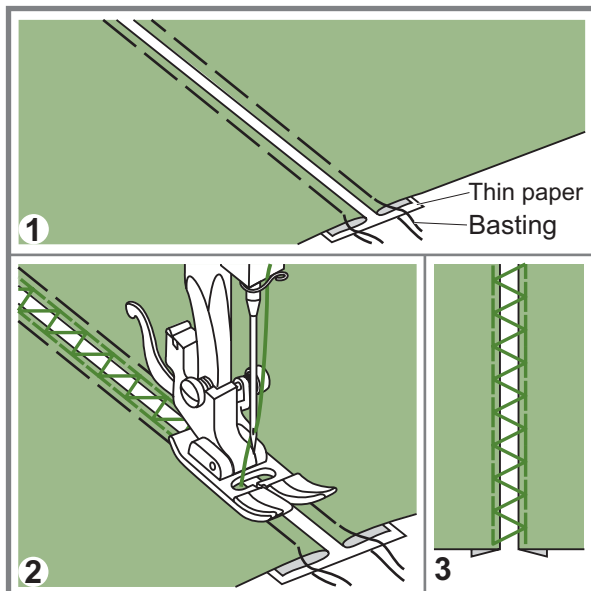
13



28



T



1. Separate the folded edges of the fabric pieces with a gap of 0.4cm (1/8") and baste them onto a piece of thin paper or water-soluble stabilizer sheet.

2. Align the center of the presser foot with the center of the two pieces of fabric and begin sewing.

3. After sewing, remove the paper.

PATCHWORK STITCH

13



25



26



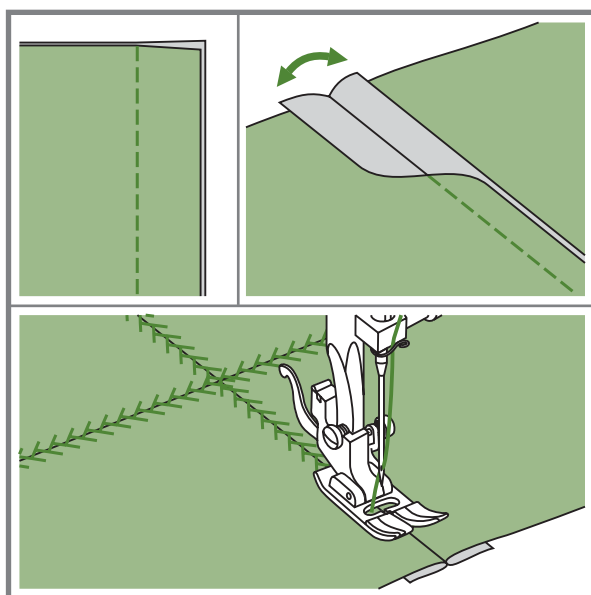
37



40



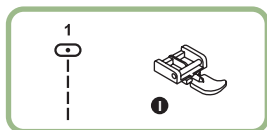
T



1. Place the two pieces of fabric with the right side together and sew with the straight stitch. Open the seam allowances and presses it flat.

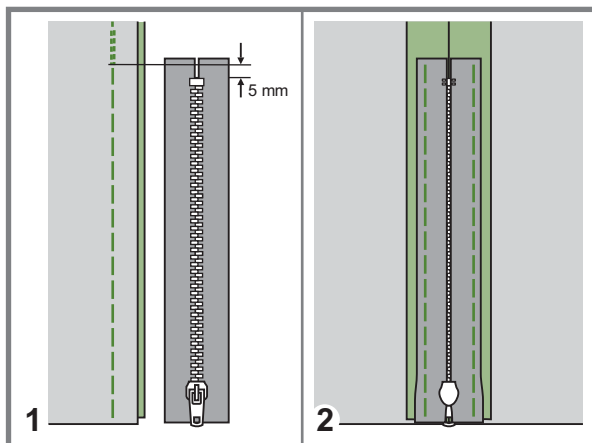
2. Place the center of the presser foot on the seam line of the joined pieces of fabric and sew over the seam.

ZIPPER INSERTION



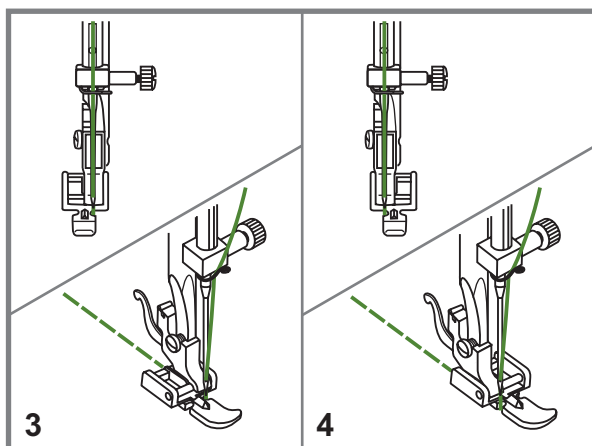
Attention: Zipper foot should be used for sewing center needle position straight stitch only. It is possible that needle could hit the presser foot and break when sewing other patterns.

Centered application



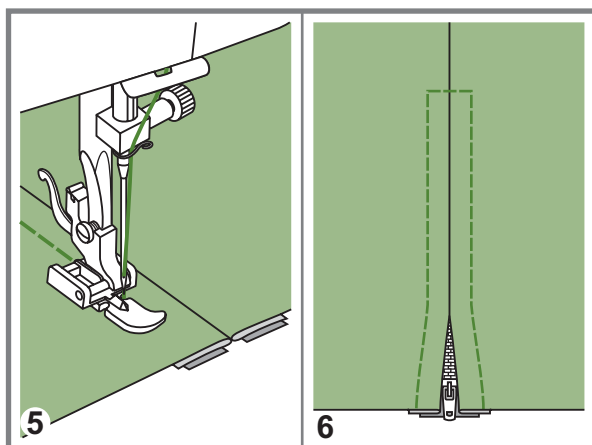
1. Baste the zipper opening on the garment.

2. Press open the seam allowance. Place the zipper face down on the seam allowance with the teeth against the seam line. Baste the zipper tape.



3. Attach the zipper foot. Attach the right side of the presser foot pin to the holder when sewing the left side of the zipper.

4. Attach the left side of the presser foot pin to the presser foot holder when sewing the right side of the zipper.

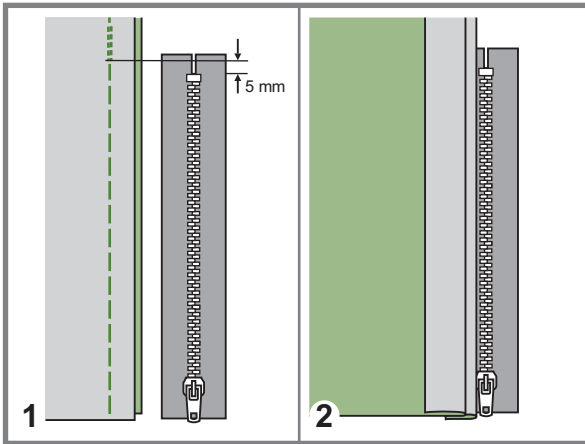


5. Stitch left side of the zipper from top to bottom.

6. Stitch across the lower end and right side of zipper. Remove the basting and press.

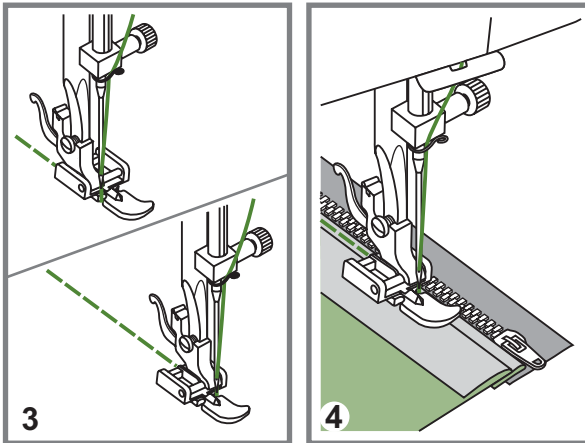
ZIPPER INSERTION

Side application

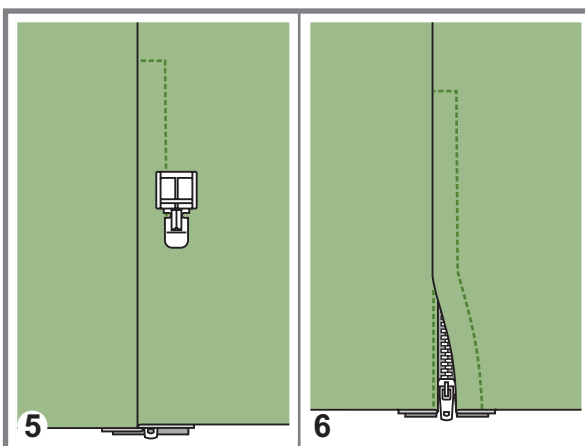


1. Baste the zipper opening on the garment.

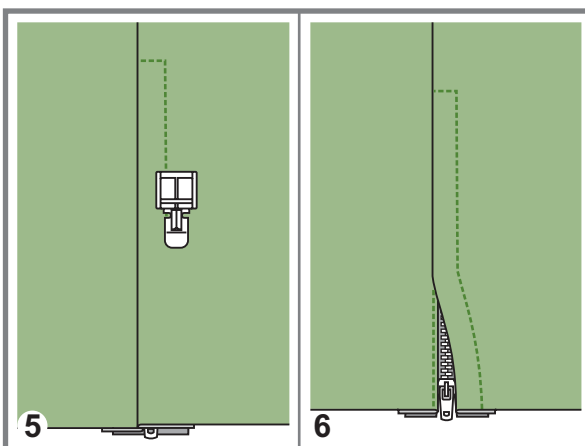
2. Fold back to the left seam allowance. Turn under the right seam allowance to form 3mm fold.



3. Attach the zipper foot. Attach the right side of the presser foot pin to the holder when sewing the left side of the zipper. Attach the left side of the presser foot pin to the presser foot holder when sewing the right side of the zipper.



4. Stitch the left side of zipper from bottom to top.



5. Turn the fabric right side out, stitch across the lower end and right side of zipper.

6. Stop about 5 cm from the top of zipper. Remove the basting and open the zipper. Stitch the remainder of the the seam.

NARROW HEMMING

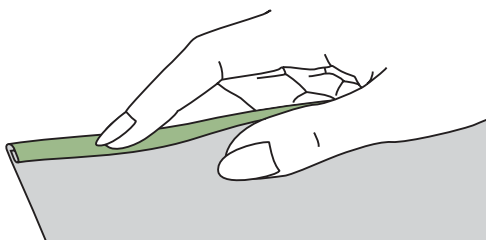
1



1.5~3.0

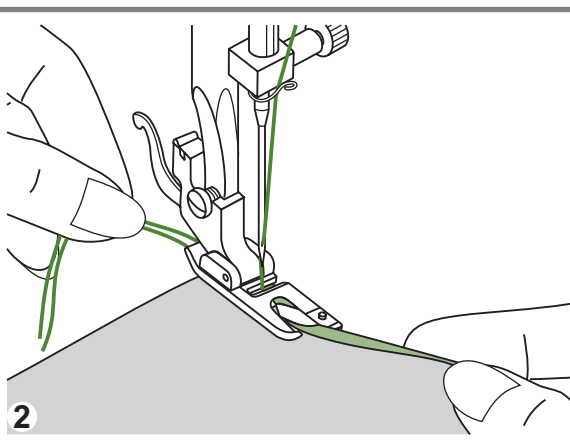
3.5

1



1. Fold edge of fabric over about 3mm (1/8"), then fold it over again 3mm (1/8") for about 5cm (2") along the edge of fabric.

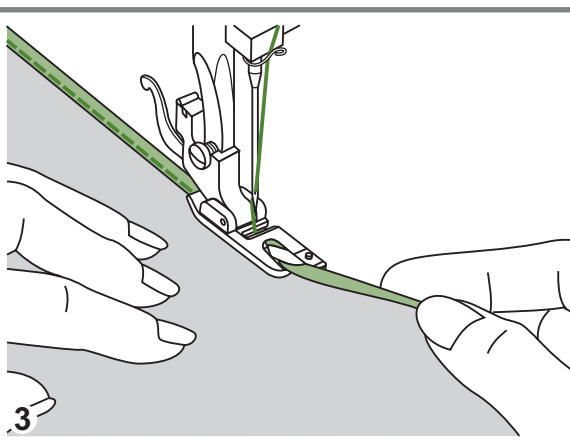
2



2. Insert the needle into the fold by rotating the handwheel toward you, and lower the presser foot. Sew several stitches and raise the presser foot.

Insert the fabric fold into the spiral opening of hemmer foot. Move fabric back and forth until the fold forms a sceolled shape.

3

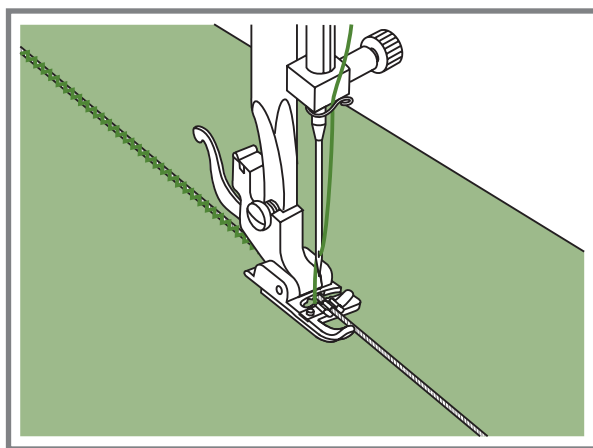
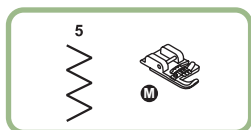


3. Lower the presser foot and start sewing slowly guiding the raw edge of the fabric in front of the hemmer foot evenly into the scroll of the foot.

CORDING

Sew over one strand of cording to create a pretty swirled design on a jacket or vest or sew over three strands of cording for border trims. Pearl cotton, knitting yarn, embroidery floss, lace thread, fine wool or lily yarn can be used for cording.

Single cording

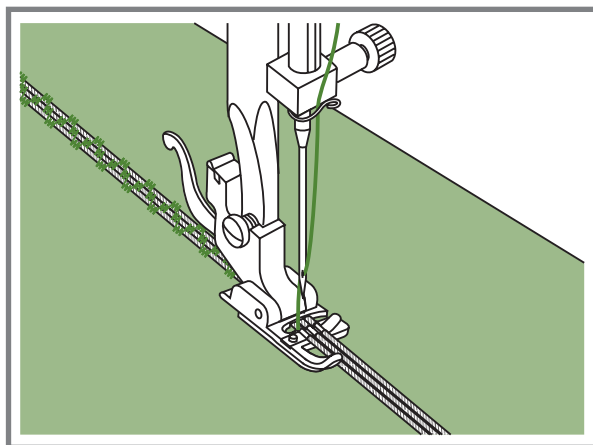
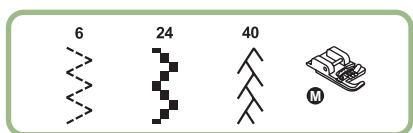


Mark the design on the fabric. Insert the cord in the center groove of the cording foot from the right side opening. Pull the cord about 5cm (2") behind the foot.

The grooves under the foot will hold the length of the cord in place while the stitches are being formed over the cord.

Select the stitch and adjust the stitch width so that the stitches are just covering the cord. Lower the foot and sew slowly, guiding the cord over the design.

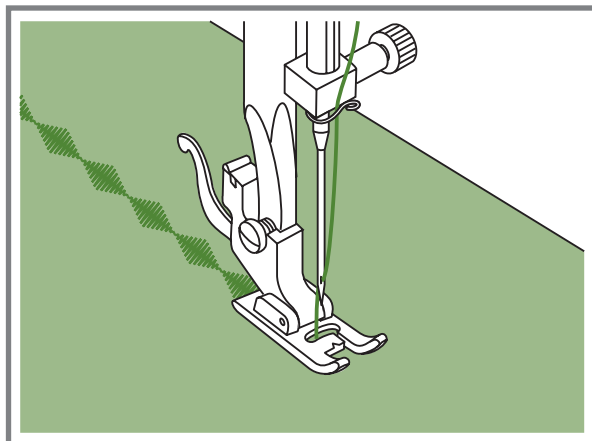
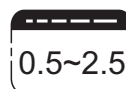
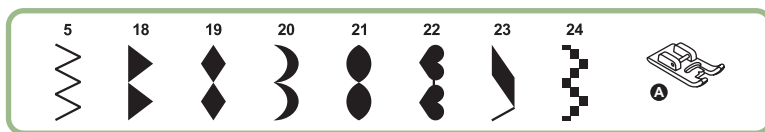
Triple cording



Push the sewing thread to the left and insert three cords into the grooves of the foot and pull about 5cm (2") of the cords behind the foot. Select the desired pattern and adjust the stitch width so that the stitches are just covering the cords. Lower the foot and sew slowly guiding the cords.

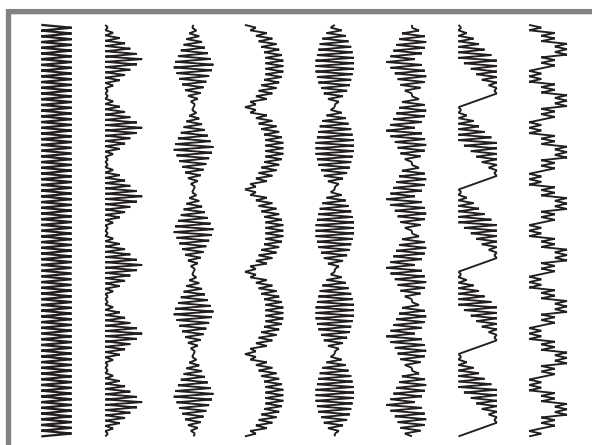


SATIN STITCH SEWING



Use the satin stitch foot for satin stitching and sewing decorative stitches. This foot has a full indentation on the underside to allow easy sewing over the thickness of the stitches formed by closely spaced zigzag stitches, and even feeding of the fabric.

To tailor the satin or decorative stitch pattern, you may adjust the length and width of the pattern by pressing the stitch length and width adjustment buttons. Experiment with fabric scraps until you get the desired length and width.

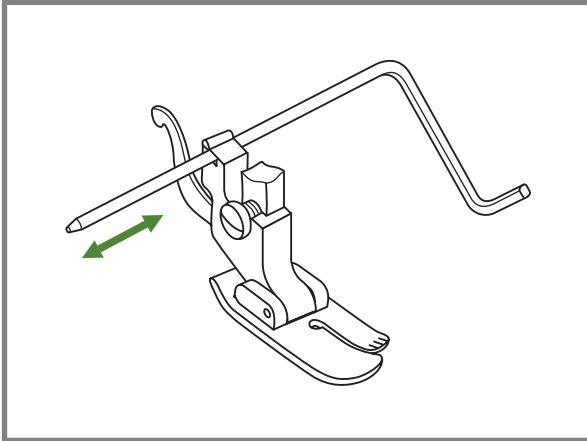
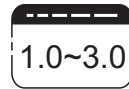
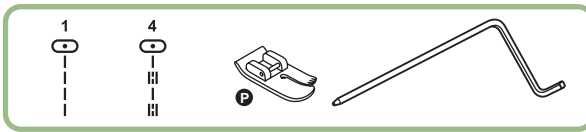


Sewing thin fabrics

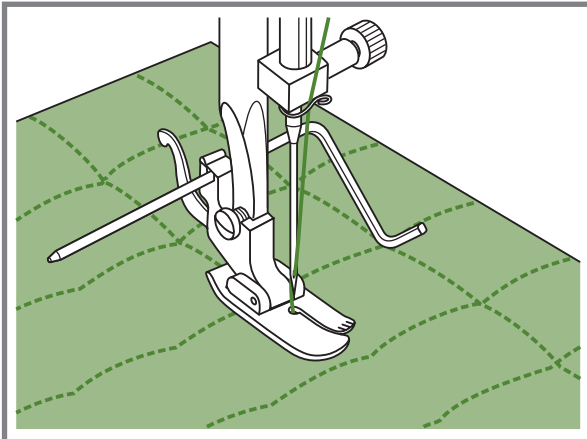
When sewing very thin fabrics, it is suggested that you use interfacing on the backside of the fabric.



QUILTING

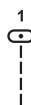


Insert the quilting guide in the presser foot holder as illustrated and set the space as you desire.



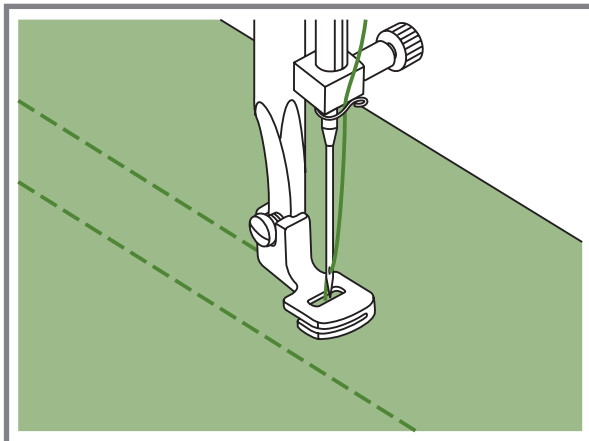
Sew the first row and move over the fabric to sew successive rows with the guide riding along the previous row of stitching.

GATHERING

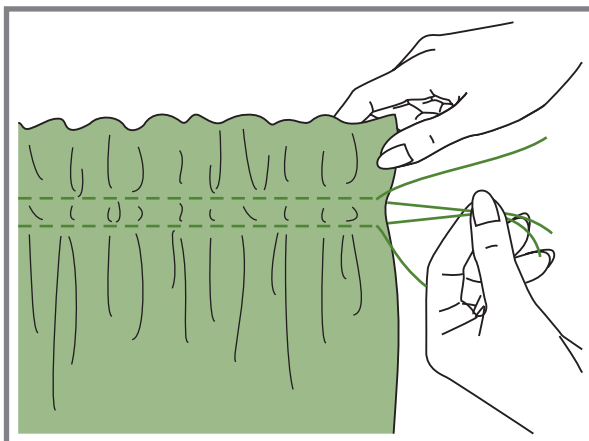


7.0

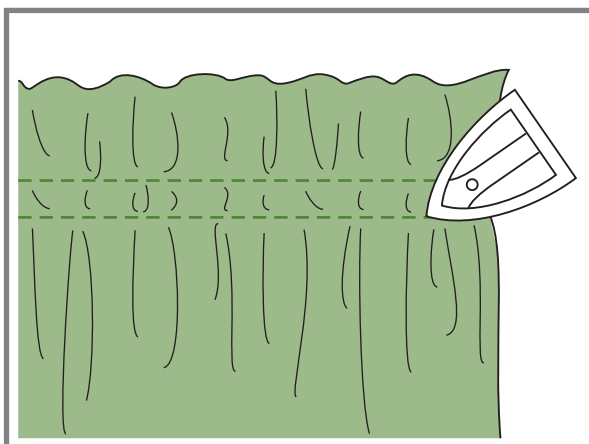
3.5



1. Remove the presser foot holder and attach the gathering foot.
2. Sew a single row or multiple rows of straight stitches.
3. If more gathering is required, loosen the upper thread tension to below 2 so that the bobbin thread lies on the underside of the material.



4. Pull the bobbin threads to obtain the desired amount of gather, then tie the threads to secure them.



5. Smooth the gathers by ironing them.

Note: It can also use the all purpose foot and gather fabric by hand by lowering the tension setting to below 2 and pulling the lower thread to gather the material.



SMOCKING

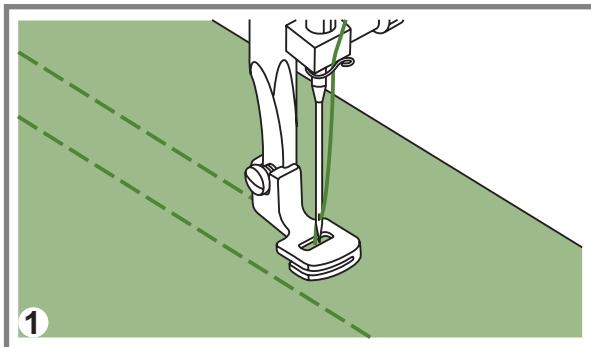
25



40

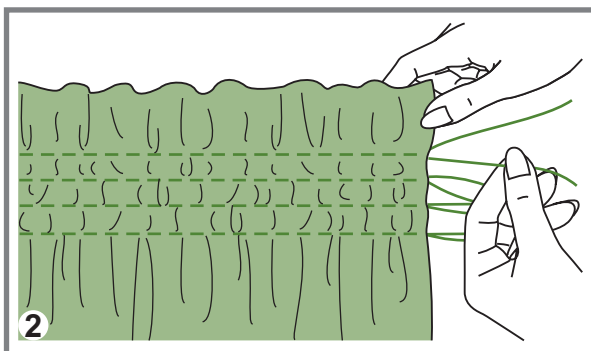


T

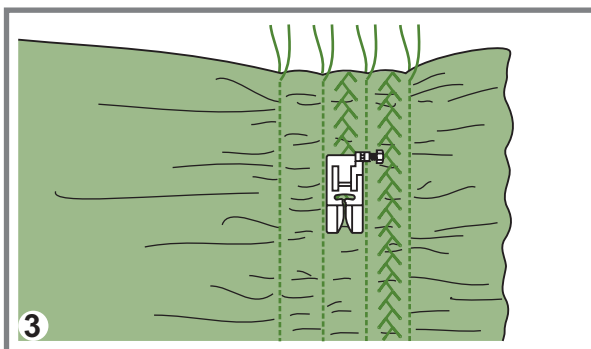


1. Use the gathering foot to sew straight lines 1cm(3/8") apart, across the area to be smocked.

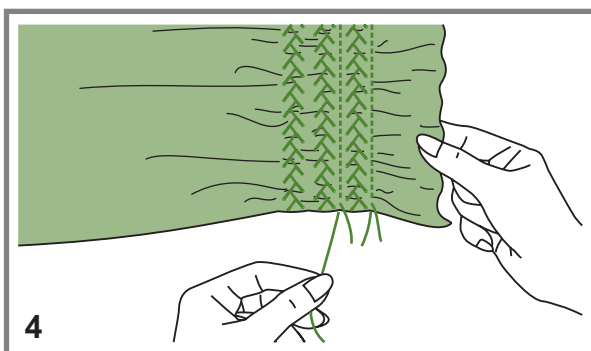
*For gathering sewing instructions, see page 40.



2. Knot the threads along one edge. Pull the bobbin threads and distribute the gathers evenly. Secure the threads at the other end.

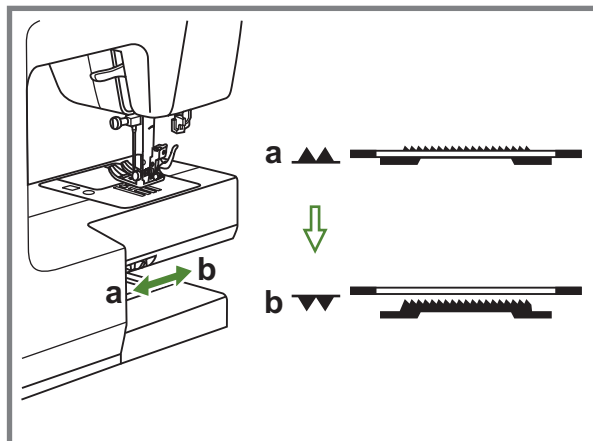
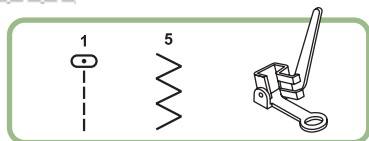


3. Reduce the tension and if necessary and sew decorative pattern stitches between the straight seams.

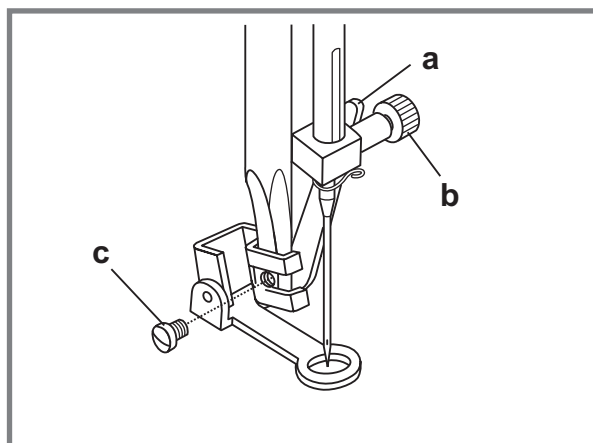


4. Pull out the gathering stitches.

FREE MOTION DARNING, EMBROIDERY AND MONOGRAMMING

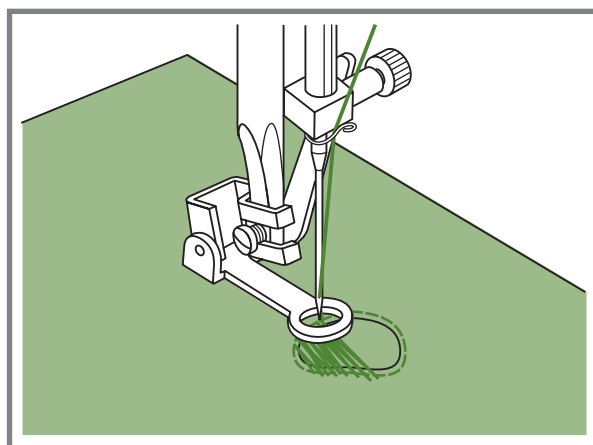


Move the drop feed control to ▼ to lower the feed dogs.



Remove the presser foot holder, and attach the darning foot to the presser foot holder bar. The lever (a) should be behind the needle clamp screw (b). Press the darning foot on firmly from behind with your index finger and tighten the screw (c).

Darning

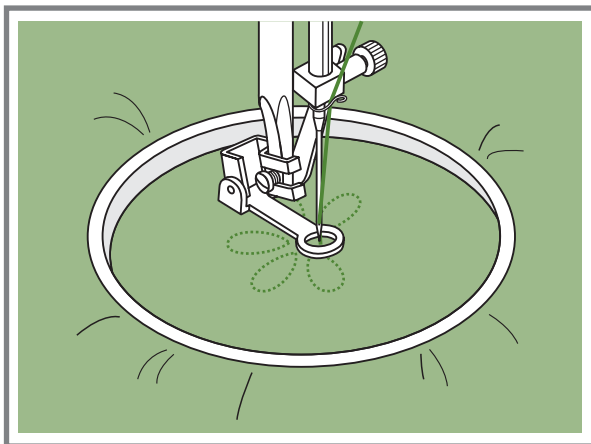


First sew around the edges of the hole (to secure the threads). Working from left to right, sew over the hole in a constant and continuous movement. Turn the work by 1/4 and sew over the first stitching moving the work slower over the hole to separate the threads and not form big gaps between the threads.

Note: Free motion darning is accomplished without the sewing machine internal feed system. Movement of the fabric is controlled by the operator. It is necessary to coordinate sewing speed and movement of fabric.

FREE MOTION DARNING, EMBROIDERY AND MONOGRAMMING

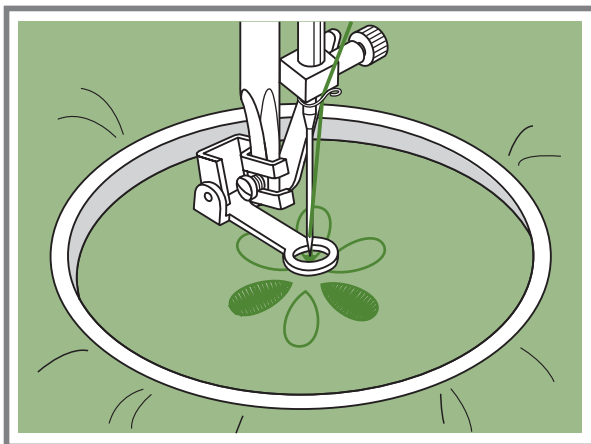
Embroidery



Select zigzag stitch pattern and adjust the stitch width as desired. Stitch along the outline of the design by moving the embroidery hoop. Make sure to maintain a constant speed.

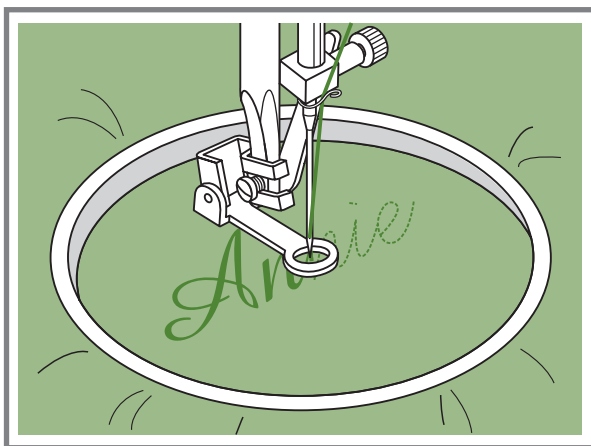
Fill in the design working from the outline towards the inside. Keep the stitches close together.

You will get longer stitches by moving the hoop faster and shorter stitches by moving the hoop more slowly.



Secure with a reinforcement stitches at the end by press Auto-Lock button.

Monogramming



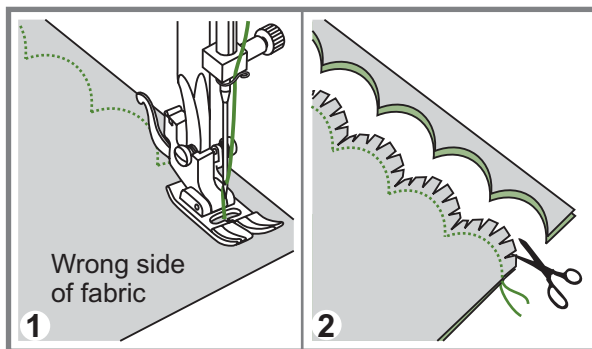
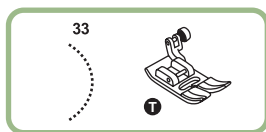
Select the zigzag stitch pattern and adjust the stitch width as desired. Sew at a constant speed, moving the hoop slowly along the lettering.

When the letter is finished. Secure with a reinforcement stitches at the end by press Auto-Lock button.

*Embroider hoop is not included with the machine.

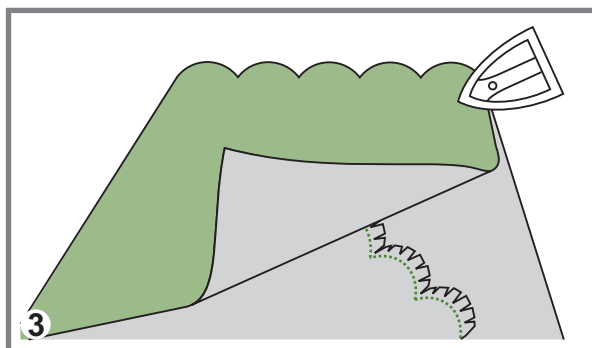
SCALLOP STITCH

Scallop hem



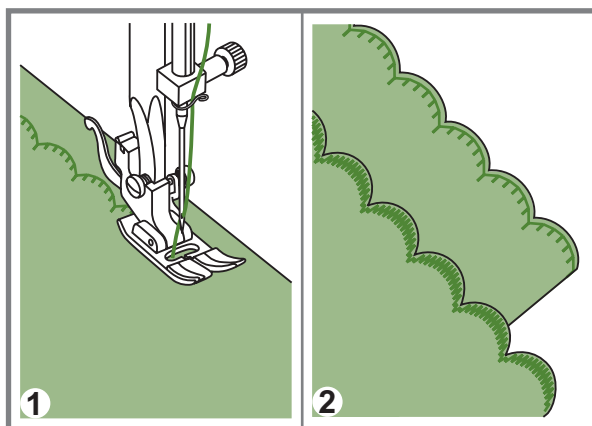
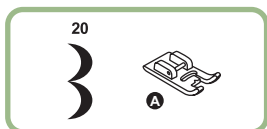
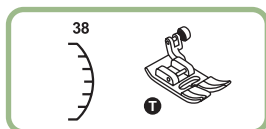
1. Fold the fabric right side together in and sew along the edge.

2. Cut the fabric along the seam leaving an allowance of 3mm (1/8") for seaming. Notch the allowance.



3. Turn fabric over and push out the curved seam to the surface and iron it.

Scallop edging



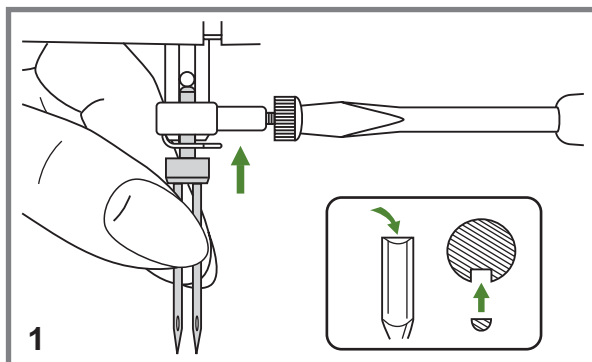
1. Sew on hem line.

2. Trim the fabric close to the stitching taking care not to cut the thread.

TWIN NEEDLE (Optional)



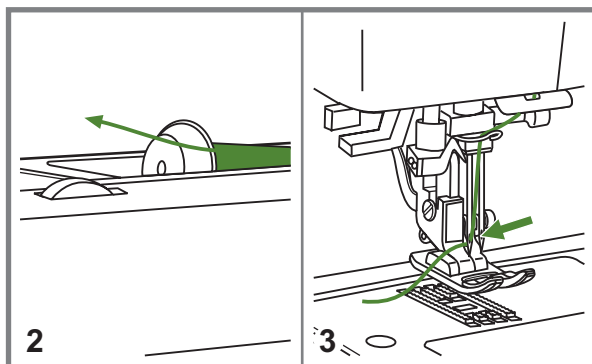
Please Note: When using twin needle on zig-zag stitch make sure the stitch width dial is set between "1" and "3.5". Do not use twin needle at setting above "3.5".



When using twin needles, use the "T" presser foot regardless of what kind of sewing will be carried out.

1. Insert the twin needle.

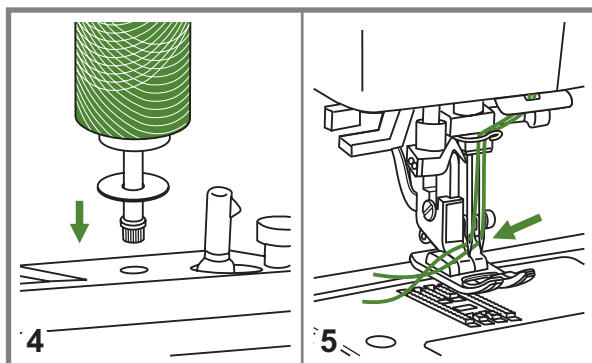
**The twin needle is optional. It is not included with the accessories..*



2. Follow the instructions for single-needle threading using the horizontal spool pin.

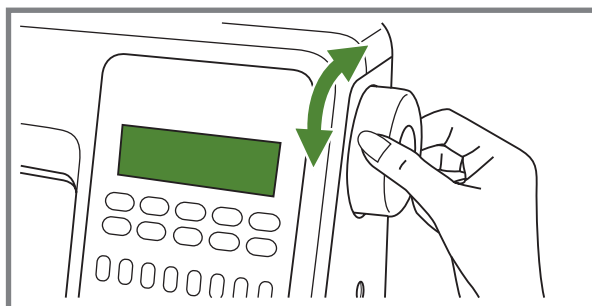
3. Thread through the left needle.

Note: Make sure that the two threads used to thread the twin needle are of the same weight. You can use one or two colors.



4. Set the second spool pin (included with the accessories) into the hole on the top of the machine. Follow the instructions for single-needle threading.

5. Thread through remaining points, making certain to omit the thread guide above the needle and pass thread through the right needle. The thread of the right needle should pass in front of the needle clamp thread guide.

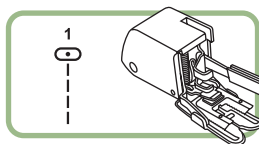


Note:

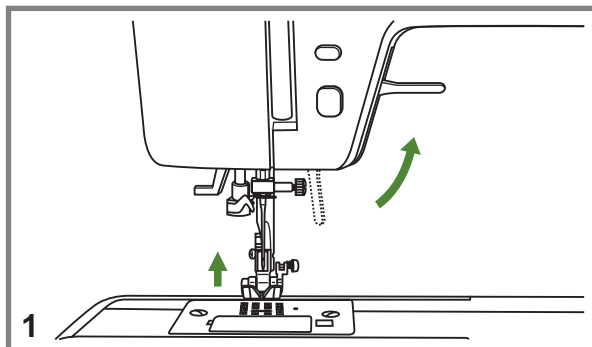
Before sewing, adjust the stitch width. Turn the handwheel to check the needle clearance, so that the needle does not hit the needle plate.

When sewing with twin needle, always proceed slowly, and make sure to maintain a low speed to insure quality stitching.

WALKING FOOT (Optional)

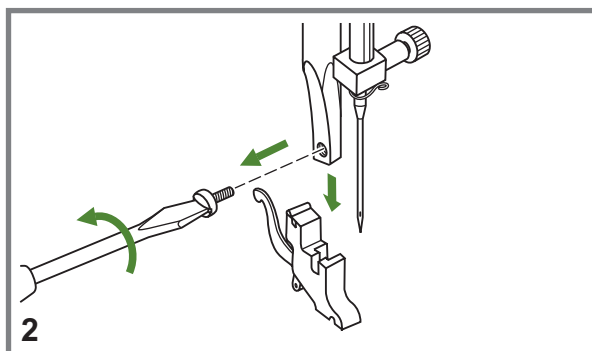


**The walking foot accessory is optional. It is not included with this machine.*



Always try to sew first without the walking foot accessory which should be used only when necessary.

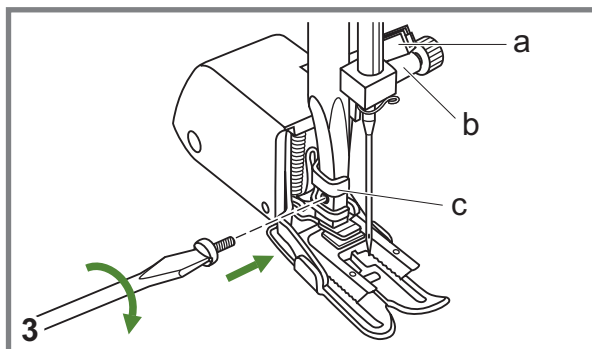
It is easier to guide the fabric and you have a better view of the seam when using the standard, regular foot on your machine. Your sewing machine offers excellent stitch quality on a wide range of fabrics from delicate chiffons to multiple layers of denim.



The Walking Foot accessory equalizes the feeding of the upper and lower layers of fabric and improves the matching of plaids, stripes and patterns. It also helps to prevent uneven feeding of very difficult fabrics.

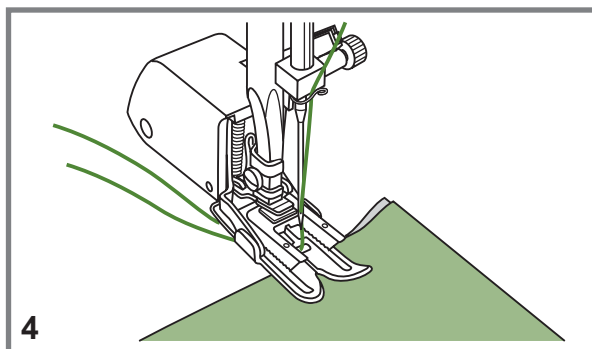
1. Lift the presser foot lifter to raise the presser foot bar.

2. Remove the presser foot holder by unscrewing (counterclockwise) the presser bar attaching screw.




3. Attach the Walking Foot to the machine as follows:

- The arm (a) should fit into above the needle screw and clamp (b).
- Slide the plastic attaching head (c) from your left to right so that it is fitted into the presser foot bar.
- Lower the presser foot bar.
- Replace and tighten (clockwise) the presser bar attaching screw.
- Make sure both the needle screw and the presser bar attaching screw are tightly secured.



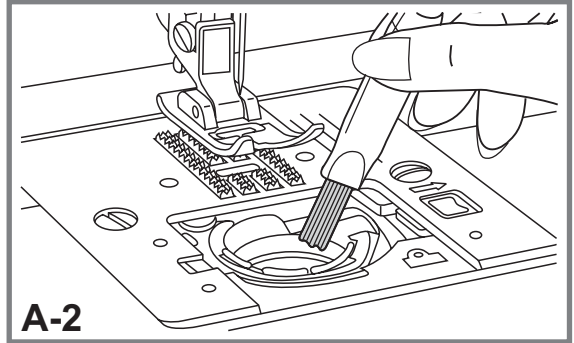
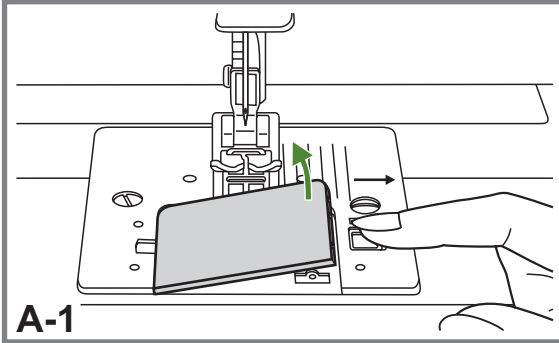
4. Draw the bobbin thread up and place both the bobbin thread and the needle thread behind the walking foot attachment.

MAINTENANCE

 **Attention:** Disconnect the machine from the wall outlet before carrying out any maintenance.

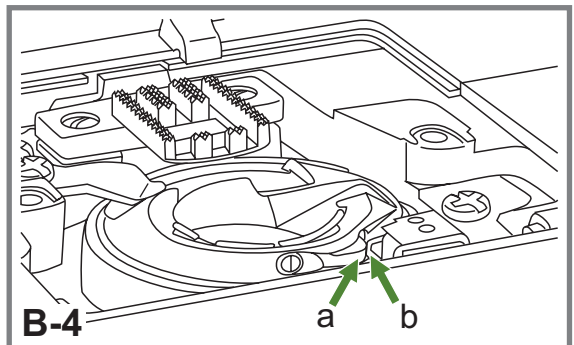
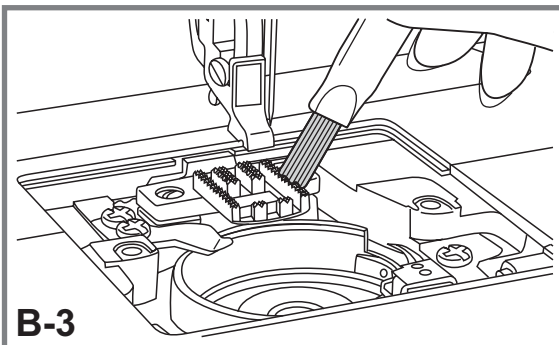
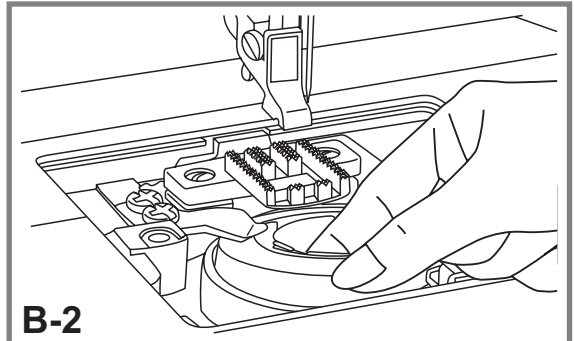
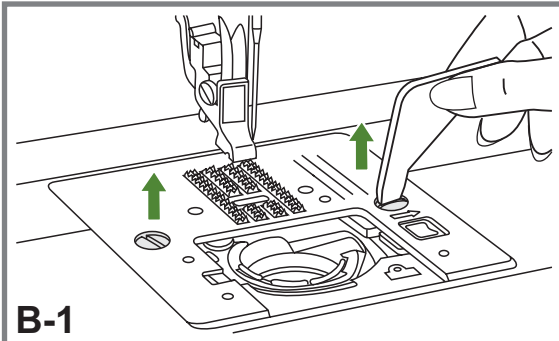
Cleaning the shuttle

If lint and bits of thread accumulate in the hook, this will interfere with the smooth operation of the machine. Check regularly and clean the stitching mechanism when necessary.



A. Bobbin holder

1. Remove the bobbin cover plate and bobbin.
2. Clean the bobbin holder with a brush.



B. Hook race and feed dog

1. Remove the needle, presser foot and presser foot holder. Remove the bobbin cover plate and bobbin. Remove the screw holding the needle plate and remove the needle plate.
2. Lift up bobbin case and remove it.
3. Clean the hook race, feed dog and bobbin case with a brush. Also clean them, using a soft, dry cloth.
4. Replace the bobbin case into the hook race so that the tip (a) fits to the stopper (b) as shown.

MAINTENANCE

! Attention: Disconnect the power cord from the wall socket before cleaning the screen and sewing machine surface, otherwise injury or electrical shock may result.

Cleaning the screen



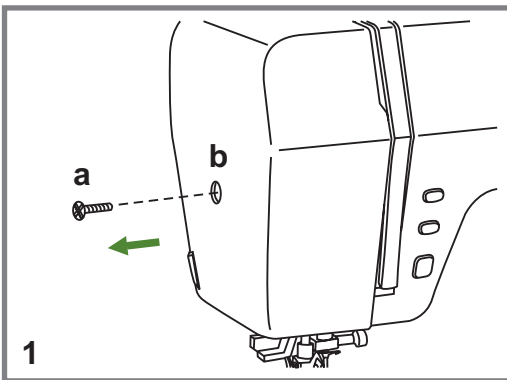
If the front panel is dirty, wipe it gently with a soft, dry cloth.

Do not use any organic solvents or detergents.

Cleaning the sewing machine surface

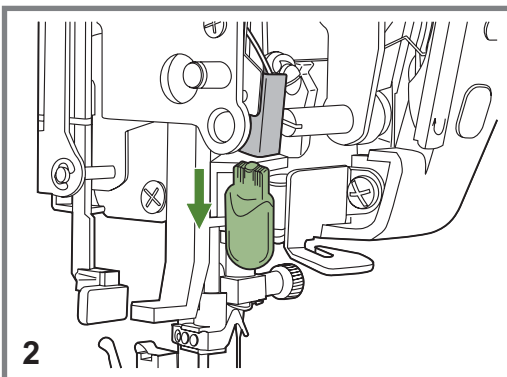
If the surface of the sewing machine is dirty, lightly soak a cloth in neutral detergent, squeeze it out firmly and then wipe the surface. After cleaning it once in this way, wipe the surface again with a dry cloth.

REPLACING THE LIGHT BULB



! Attention: Turn the power switch off and wait until the lamp has cooled down before touching it.

1. Loosen the screw (a) on the left side of the sewing head and remove the face plate (b).



2. Pull light bulb downward to remove.
Replace the bulb with same type rated 5w.
Set the face plate and tighten the screw.



TROUBLE SHOOTING GUIDE

Before calling for service, check the following items. If the problem still persists, contact the place of purchase or your nearest authorized dealer.

Problem	Cause	Correction
Upper thread breaks	1.The machine is not threaded correctly 2.The thread tension is too tight 3.The thread is too thick for the needle 4.The needle is not inserted correctly 5.The thread is wound around the spool holder pin 6.The needle is damaged	1.Rethread the machine 2.Reduce the thread tension (lower number) 3.Select a larger needle 4.Remove and reinsert the needle (flat side towards the back) 5.Remove the reel and wind thread onto reel 6.Replace the needle
Lower thread breaks	1.The bobbin case is not inserted correctly 2.The bobbin case is threaded wrong 3.The lower thread tension is too tight	1.Remove and reinsert the bobbin case and pull on the thread. The thread should pull easily 2.Check both bobbin and bobbin case 3.Loosen lower thread tension as described
Skipped stitches	1.The needle is not inserted correctly 2.The needle is damaged 3.The wrong size needle has been used 4.The foot is not attached correctly	1.Remove and reinsert needle(flat side towards the back) 2.Insert a new needle 3.Choose a needle to suit the thread and fabric 4.Check and attach correctly
Needle breaks	1.The needle is damaged 2.The needle is not correctly inserted 3.Wrong needle size for the fabric 4.The wrong foot is attached	1.Insert a new needle 2.Insert the needle correctly (flat side towards the back) 3.Choose a needle to suit the thread and fabric 4.Select the correct foot
Loose stitches	1.The machine is not correctly threaded 2.The bobbin case is not correctly threaded 3.Needle/fabric/thread combination is wrong 4.Thread tension is wrong	1.Check the threading 2.Thread the bobbin case as illustrated 3.The needle size must suit the fabric and thread 4.Correct the thread tension
Seam gather or pucker	1.The needle is too thick for the fabric 2.The stitch length is adjusted wrong 3.The thread tension is too tight	1.Select a finer needle 2.Readjust the stitch length 3.Loosen the thread tension
Uneven stitches, uneven feed	1.Poor quality thread 2.The bobbin case is threaded wrong 3.Fabric has been pulled	1.Select a better quality thread 2.Remove the bobbin case, the thread and reinsert correctly 3.Do not pull on the fabric while sewing, let it be taken up by the machine
The machine is noisy	1.Fluff or oil have collected on the hook or needle bar 2.Poor quality oil has been used 3.The needle is damaged	1.Clean the hook and feed dog as described 2.Only use good quality sewing machine oil 3.Replace the needle
The machine jams	Thread is caught in the hook	Remove the upper thread and bobbin case, turn the handwheel backwards and forwards by hand and remove the thread remnants.

